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THE
DICTIONARY
OF
DAILY WANTS

IN THREE VOLUMES.

IT IS ONE THING TO POSSESS A BOOK — ANOTHER THING TO USE IT. THE DICTIONARY OF DAILY WANTS IS EMINENTLY A BOOK FOR USEFUL PURPOSES. THERE CAN SCARCELY ARISE A DOMESTIC WANT UPON WHICH IT WILL NOT BE FOUND TO AFFORD GOOD ADVICE, AND SOUND PRACTICAL INFORMATION. ITS SPECIALITIES ARE THREEFOLD:—1. COMPREHENSIVENESS OF SUBJECTS. 2. ACCURACY OF INFORMATION. 3. EASE OF REFERENCE.

VOL. III.

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ADVERTISEMENT.

THE DICTIONARY OF DAILY WANTS may be said to have done for matters of Praeticeal Utility in Domestic Affairs, what the great naturalist, Linnæus, did for the science of Botany—it has brought the thousands of useful items scattered in disorder through an unlimited number of channels, into one Arrangement and System, by which they may be easily found and applied.

We assure those to whom this Dictionary may become a Household Book, that it has been compiled with the greatest care—that every line has been attentively considered before being suffered to pass through the press—that the Medicinal Articles, and those relating to Law, have been written by professional gentlemen not only qualified to *write*, but experienced by *practice* in their avocations; and that, in the composition of the DICTIONARY, many talents have been employed, and many friendly hands engaged.

The DICTIONARY has already found a very large sale—no less than FIFTY THOUSAND copies of the complete Work having

been issued. The DICTIONARY OF USEFUL KNOWLEDGE (a companion Work), forming a Book of Reference upon all matters of History, Geography, Science, Natural History, Statistics, &c., is now in progress, and is well worthy to stand by the side of the DICTIONARY OF DAILY WANTS : thus, the TWO DICTIONARIES form *a complete and invaluable Encyclopædia, embracing all subjects of interest and of practical utility.*

In compiling the DICTIONARY OF DAILY WANTS, the Editors have availed themselves of works by the most eminent authorities in various departments. A List of these authorities is appended, and the grateful acknowledgments of the Editors are hereby tendered to the Authors of the Books enumerated.

LONDON: *December, 1860.*

LIST OF AUTHORITIES

CONSULTED IN WRITING THE

"DICTIONARY OF DAILY WANTS."

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|--|---|
| Abell's Skilful Housewife's Book. | Conquest's Letters to a Mother. |
| Acton's Bread Book. | Cooley's Cyclopædia of Practical Receipts. |
| Acton's Modern Cookery. | Corner Cupboard. |
| Advice to the Embarrassed. | Cottage Library. |
| Ansel's Treatise on Friendly Societies. | Cottage Gardener's Dictionary. |
| Art of Catering and Carving. | Crabb's Dictionary of General Knowledge. |
| Bakewell's Great Facts. | Crawley's Theory and Practice of Billiards. |
| Bakewell's Mother's Practical Guide. | Cust's Invalid's Own Book. |
| Bechstein's Cage Birds. | Cyclopædia Britannica. |
| Beekeeper's Manual. | Cyclopædia Metropolitana. |
| Bernhard's 100 Beverages. | Cyclopædia of Industry. |
| Best Method of Doing Common Things. | Dalgairns's Practice of Cookery. |
| Bishop's Instructions for the Aquarium. | De Laspée's Calisthenics. |
| Bishop's Wife's Own Book of Cookery. | Dickson's Management of Poultry. |
| Bishop's County Court Practice. | Dinner Question. |
| Black's Treatise on Brewing. | Dod's Cook and Housewife's Manual. |
| Blaine's Encyclopædia of Rural Sports. | Dolby's Cook's Dictionary. |
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| Bohn's Handbook of Games. | Doyle's Cyclopædia of Practical Husbandry. |
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| Book of Summer Drinks. | Eaton's Cook and Housekeeper's Dictionary. |
| Book about all Kinds of Things. | Economic Library. |
| Booth's Art of Wine Making. | Enquire Within upon Everything. |
| Boswell's Poultry Yard. | Family Economist. |
| Bowman's Common Things of Every-day Life. | Family Manual. |
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| Bregon's Practical Cook. | Forrest's Every Boy's Book. |
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| Bull's Hints to Mothers. | Galton's Art of Travel. |
| Cabinet Lawyer. | Gardener's and Farmer's Reason Why. |
| Callicott's Household Hints. | Glenny's Flower Garden. |
| Campbell's Farmer's and Cottager's Guide. | Glenny's Gardening for Cottagers. |
| Chambers's Edinburgh Journal. | Glenny's Handy Book on Gardening. |
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| Chavasse's Advice to a Mother. | Glenny's Gardener's Every-Day Book. |
| Child's Mother's Book. | Gosse's Handbook to the Marine Aquarium. |
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 Humphrey's Ocean Garden and River Garden.
 Interview.
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 Johnson's Farmer's Encyclopædia.
 Johnson's Garden Manual.
 Johnson's Life, Health, and Disease.
 Johnston's Chemistry of Common Life.
 Kemp's How to Lay out a Small Garden.
 Kitchiner's Cook's Oracle.
 Kitchiner's Housekeeper's Oracle.
 Knight's Popular Cyclopædia.
 Leslie's Confectioner.
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 Library of Entertaining Knowledge.
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 Loudon's Cyclopædia of Agriculture.
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 One Thousand Practical Receipts.
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 Webster and Parke's Cyclopædia of Domestic
 Economy.
 White's Lessons on Housewifery.
 Youatt on the Dog.
 Youatt on the Horse.
 Young Mother.
 Young Wife.

PATERNOSTER line for angling is principally used for pike and perch fishing, although chub and trout will be occasionally caught whilst using it. It is made of either gimp or gut of from a yard to a yard and a half in length; at the bottom is a perforated bullet or pear-shaped lead, with a brass ring inserted, to which the line is to be attached; at six inches from the bottom a loop is made, a second a foot higher up, and again a third another foot further up the line; to each of these loops hooks are to be attached, tied on to four or five inches of either gut, hog's bristle, or gimp; the two former for perch fishing, and the latter for jack fishing. The use of a bristle is, that as it is stiffer and less affected by water than gut, it keeps the bait from getting entangled with the line by wrapping the hook length around it; gimp is used for jack fishing in preference to gut or bristle, because the jack is provided with sharp teeth, which frequently cut them. The hooks should be—for jack, Nos. 1 or 2; and for perch, Nos. 5 or 6. The baits to be used are—for perch, small gudgeon, minnows, and worms, and for jack, gudgeon, dace, chub, or roach. The paternoster is to be attached to the running line, and when baited ready for use should be dropped into holes between weeds, into eddies, or close to the stream falling from a weir or mill, letting the lead sink and keeping the line tight; and upon *feeling* a run, gently give line, and allow a minute before striking. This line can be used amongst weeds, because the lead at the bottom will retain the baits in the place chosen, whereas a live bait swimming about at will would be sure to get entangled amongst them.

PATENS.—Articles made for the feet, to protect them from wet and damp. From their clumsiness, and the danger attending the wearing of them, they are now seldom worn, and are almost entirely superseded by the clog and golosh.

PATTERNS FOR DRESSES, &c.—Mix some lamp-black with sweet-oil. With a piece of flannel, cover sheets of writing paper with the mixture; dab the paper with a bit of fine linen. When using, put the black side on another sheet of paper, and fasten the corners together with small pins. Lay on the back of the black paper the pattern to be drawn, and trace over it with the point of a steel drawing pencil; the black will then leave the impression of the pattern on the under sheet, on which it may be drawn with ink.

PATTIES.—See BEEF; CHICKEN; LOSTER; OYSTER; VEAL, &c.

PATTY-PAN.—A tin shape or dish used to bake patties in, and made of various dimensions and designs, according to the use to which they are put. They should be always kept very clean and bright, and not employed for any other purpose than that for which they are intended.

PAVING.—In preparing for laying down pavements, the first thing to be attended to is the foundation. This must be made of strong and uniform materials, well rammed together, and accurately formed, to corre-

spond with the figure of the superincumbent pavement. The kinds of stone used in paving are chiefly granite, whinstone or trap, Guernsey or other pebbles, or water-worn granite or trapstones. The size of the stones used in road paving is commonly from five to seven inches long, from four to six inches broad, and from six to eight inches deep. In laying down stones, each stone should lean broadly and fairly on its base; and the whole should be rammed repeatedly to make the joints close; the upper and lower sides of the stones should be as near each other as possible, but they should not touch each other laterally except near the top and bottom, leaving a hollow in the middle of their depth to receive gravel, which will serve to hold them together. This method of paving may be easily executed by common workmen, who may throw in gravel between the stones as they are laid down. It will be useful to cover newly-laid pavement with gravel, which will preserve the fresh pavement for some time from the irregular pressure of wheels till the whole is consolidated. The stones should be of equal hardness, or the soft ones will be worn down into hollows. In every species of paving, no stones should be left higher or lower than the rest; for a wheel descending from a higher stone will, by repeated blows, sink or break the lower stone upon which it falls. Great advantage will be found in filling up the joints with lime water, which finds its way into the gravel between and underneath the stones, and forms the whole into a solid concrete mass.

PAWNBROKER.—A person who receives goods by way of pawn or pledge, for the repayment of money lent thereon at a higher rate of interest than five per cent. per annum. The rates of interest, fixed by Act of Parliament, on goods or chattels placed in the hands of pawnbrokers, are as follows:—For every pledge not exceeding 2s. 6d., one halfpenny, for any term not exceeding one calendar month it shall remain in pawn, and the same for every month afterwards, including the current month in which such pledge is returned, though such month is not expired.

If 5s. shall have been lent	1d.
7s. 6d. "	1½d.
10s. "	2d.
12s. 6d. "	2½d.
15s. "	3d.
17s. 6d. "	3½d.
20s. "	4d.

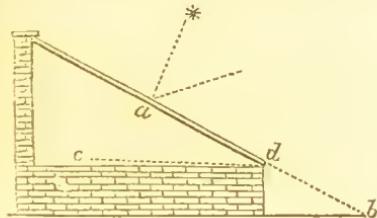
So on in proportion for any sum not exceeding 40s. If exceeding 40s. and not exceeding 42s., 8d.; if 42s. and not exceeding £10, after the rate of 3d. for every 20s. by the calendar month, and so in proportion for every fractional sum. For any intermediate pledge between 2s. 6d. and 40s., the pawnbroker may take after the rate of 4d. for the loan of 20s. per month. Where the fraction of the sum to be paid is a farthing, the pawnbroker is bound to give a farthing in change for a halfpenny. Parties may redeem goods within seven days after the expiration of the first calendar month with-

out paying interest for the extra seven days; or within fourteen days on paying for one month and a half; but parties redeeming after the expiration of the fourteen days must pay the second month; and the like regulations are observable in every subsequent month, when the parties apply to redeem. Pawns must be entered in a book, with a description of the goods, the money lent, the date, and the name and abode of the person pawning, and a duplicate entry, with the name and abode of the pawnbroker, shall be given on a note to the pawnner. The duplicate is given gratis if the sum lent is under 5s., but if the money is above 5s. and under 10s. the pawnbroker may take a half-penny; for 10s. and under 20s. one penny; 20s. and under £5, twopence; £5 or more, fourpence. Articles cannot be taken out of pawn without the production of the duplicate, the holder of which is assumed to be the owner. If a duplicate be lost or stolen, the pawnbroker is required to give a copy of it to the party representing himself as the owner of the articles pledged, with a blank form of affidavit, which must be filled up, with a statement of the circumstances under which the original duplicate was lost, to the truth of which, deposition on oath must be made before a magistrate. For this second duplicate the pawnbroker is entitled to demand one halfpenny if the sum advanced does not exceed 5s.; from 5s. to 10s., one penny; and afterwards in the same proportion as for the original duplicate. The penalty against unlawfully pawning goods the property of others is between 20s. and £5, besides the full value of the goods pledged; and in default of payment, the offending party may be committed for three months' imprisonment and hard labour. Persons forging or counterfeiting duplicates, or not being able to give a good account of themselves on offering to pawn goods, are liable to imprisonment for any period not exceeding three months. The Act empowers police officers to search pawnbrokers' premises where suspected to contain unfinished goods illegally pledged, and goods unlawfully pawned must be restored to the owner by the pawnbroker. All pawned goods are forfeited, and may be sold, if not redeemed at the end of one year. When the sum lent is above 10s. and not exceeding £10, they must be sold by public auction, notice of such sale being twice given at least two days before the auction in a public newspaper; but on a notice in writing in the presence of a witness from the owner of the goods not to sell, three months further time shall be allowed beyond the year of redemption. Pictures, prints, books, bronzes, statues, busts, carvings in ivory and marble, cameos, intaglios, musical, mathematical, and philosophical instruments, and china, must be sold separate from other goods, on the first Monday in January, April, July, and October in every year. An account of sales of pledges above 10s. must be entered in a book kept by the pawnbroker; and if articles are sold for more than the sum for which they were pledged, with interest thereon, the owner is entitled to the overplus, if demanded with-

in three years after the sale. Pawnbrokers' sale books are open to inspection on payment of a fee of one penny. The penalty on pawnbrokers selling goods before the proper time, or injuring or losing them, and not making compensation to the owner, according to the award of a magistrate, is £10. The Act prohibits pledges being taken from persons intoxicated or under twelve years of age (within the limits of the metropolitan police district, sixteen years of age). Pawnbrokers are prohibited from buying goods between the hours of 8 A.M. and 7 P.M.; or receiving pledges from Michaelmas day to Lady day, before 8 A.M. or after 8 P.M.; or for the other part of the year before 7 A.M. or after 9 P.M. excepting on Saturdays, and the evenings preceding Good Friday, Christmas Day, and every fast or thanksgiving day, when the hour is extended to 11 P.M. No mention is made in the Act as to the time of delivering pledges.

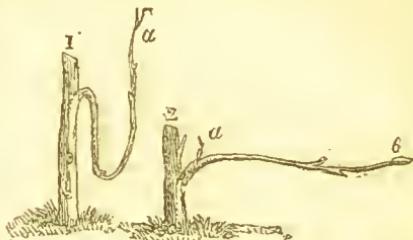
PEACH, CULTURE OF.—The peach and nectarine, although classed as two distinct fruits, owe their origin to one and the same parent, and the mode of cultivating them is identical. The selection of a proper soil is an important matter in the culture of the peach. A rich, mellow, somewhat adhesive loam, taken from near the surface of an old pasture, without the aid of artificial enrichment, together with what vegetable matter may exist on it, is the best for all moderately good climates. A light soil may be more advisable in a cold or damp locality. The mode of propagation is usually by budding. This is performed in July. Sometimes the old stock is planted against the wall in its permanent position and budded there, but generally they are budded in the nursery. The bud is introduced at about six inches from the ground. It remains dormant until the succeeding spring, when the head of the stick is cut off close above the bud, and the wound pared off particularly neat, in order that the returning sap may heal and skin it over. It is good practice to apply some white lead or a similar material, in order to exclude the air and moisture. During this summer the young bud will produce a shoot of some two or three feet in length, and this is headed back in the succeeding sprig to about five or six eyes, thus leaving about five or six inches of the base of the shoot. The bud generally produces laterals during the first summer, especially towards the upper end; and the point where these commence branching generally indicates the point to which they are cut back. In the summer following they will produce four or five shoots, which must be carefully trained and kept totally free from insects, and in the succeeding autumn the tree is fit for removal to a wall. There is no better stock for general peach-budding than the plum, a kind called the mussel being very generally used. The peach may be also raised from the stone. The stones may be either sown on heat, to expedite them, or otherwise. They should be cleansed and dried at the ripening period, and sown late in the autumn, care being taken to preserve them from the mice. The seedlings must be carefully

transplanted to the nursery immediately after one summer's growth, unless sowed to remain. Then pruning must be performed as with other sticks, and their subsequent culture is similar. The system of forcing the peach is one very frequently adopted. The best form for a peach-house is that constructed upon the principles shown in the engraving. As the lights to be removed to the required extent with facility must necessarily be short, the back wall of the house must scarcely extend nine feet in height, and this height raises the rafters sufficiently high to permit the tallest person to walk with perfect convenience under them. The lights are divided in the middle at the point *a*, the lower are made to slide down to *d*, and the upper to point *a*. The flue or hot-water pipe enters on the east or west end, as most convenient, and passes within six inches of the east and west wall, but not within less than two feet of the low front wall, and it returns in a parallel line through the middle of the house, in the



direction either east or west, and goes out at the point at which it entered. The house takes two rows of peach or nectarine trees, one of which is trained on trellises, with intervals between for the gardener to pass, parallel with the dotted line *c*. These trees must be planted between the flue of the front wall and the other row near the back wall, against which they are to be trained. Forcing in points is an excellent mode, and enables the peach to be thus grown in establishments where there is no regular peach-house. Pot a three-years-old tree in a twelve-inch pot, cutting it back to form buds; and shift every year until it has attained an eighteen-inch pot, a size which never need be exceeded. Let the soil be turfy, and mixed with decaying wood from the bottom of an old wood stock. The modes adopted for training peach trees are various. Experience proves that very fine fruit is seldom produced on very strong or on very weak branches, but generally on branches of a medium growth; therefore, to render a tree permanently fruitful, it is necessary to manage and train it in such a manner that all the sustenance furnished by the roots shall be appropriated to the production of branches of a proper and equal growth. The sap in all erect young trees, of which the peach is one, will flow into and through those channels that occupy the most vertical position next the root, and the strongest shoot will form at the point bud *a*, fig. 1. But if a branch be placed in a horizontal position, as in fig. 2, the strongest shoot will

be produced in the most vertical bud nearest the base *a*, and the point-bud *b* will form the weakest shoot. Protecting the blossom is an important branch of peach culture. The tender leaves and young shoots require pro-



tection from late spring frosts, and also from the cold evaporating effects of an east wind. The most effective and at the same time the most economic protection for all fruit-trees on open walls, is a nine-inch wooden projecting portable coping, secured to permanent iron brackets, built in the walls close under the stone coping. When the season of spring protection is over, the boarding can be removed and placed under cover until again required. As soon as the fruit of the peach begins to change colour towards ripening, these wooden copings are again put on to keep the trees, and particularly the fruit, dry, and also to prevent its being driven off by the heavy rains of autumn, as well as to assist in ripening the wood. Thinning the fruit is a necessary precaution to attend to. As a general rule, one fruit on each bearing shoot, or two at the most, are all that should be left. By leaving too many the size of the fruit is diminished, and the tree becomes materially weakened.

PEACH FRITTERS. — Make a thick batter composed of six eggs well beaten, three-quarters of a pint of cream, a little yeast, a glass of white wine, half a glass of ratafia, and a little orange-flower water; add a little grated nutmeg, and as much flour as may be necessary; cut half a dozen peaches into thin pieces, mix with the batter, which must be then covered over, and set near the fire for three-quarters of an hour, drop the batter into boiling lard, and fry to a good colour. Strew sugar over them when served.

PEACH MARMALADE. — Peel and cut ripe peaches and put them into an iron saucepan, with three-quarters of a pound of sugar for every pound of fruit, taking care that they do not burn; stir them frequently, and when nearly done, take the kernels, which have been previously put aside and blanched, and add them to the marmalade; put the mixture into pots, covering the tops with white paper, dipped in brandy, and tying over with paper, or thin parchment.

PEACH RATAFIA. — Take four quarts of pale French brandy, two quarts of peach juice, and two pounds of powdered sugar; remove the kernels, put them into a cloth, and press them by a hand press; add the juice from the kernels to the above mixture, and when the whole has stood together for

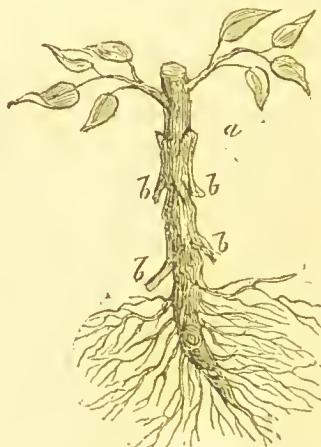
five or six weeks, in a closely-covered jar, filter it off, and put it into bottles. If it be not convenient to press the kernels, put them in a bottle with some brandy separately, having first chopped them well up or bruised them, and when the ratafia is decanted, add the brandy in which the kernels have been steeped.

PEACHES PRESERVED.—Take some peaches which are nearly ripe, peel them, cut them in two, take out the kernels, and blanch them a little; boil them gently in syrup, and leave them in it till the next day; then take them out and let them drain; afterwards, boil the syrup thoroughly, put the fruit into it and let them simmer for a short time, after which put them into bottles. The quantity of syrup put into the bottles, should be about equal to the bulk of the fruit. If they are to be preserved in their green state, they must be peeled and the kernels taken out, preserving the form of the peach as much as possible. Blanch them over a moderate fire, in plain water; then take them out and put them into cold water; drain them, and boil them gently in syrup. After a little while remove them from the fire, and allow them to become cold; boil them again until the syrup becomes very thick, then bottle. To preserve them in brandy, wipe and pick the fruit, and have ready a fourth of the weight of fine powdered sugar. Put the fruit into an ice-pot which shuts quite close; throw the sugar over it, and then cover the fruit with brandy, between the top and the cover of the pot put a piece of double whity-brown paper. Set the pot in a saucepan of water till the brandy be quite hot, without boiling. Put the fruit into a jar, pour the brandy over it, and cover as in ordinary preserves.

PEA-FOWL.—In domesticating this bird, one male is usually kept with three or four hens. The female is extremely fastidious in selecting a spot to lay in, and generally leaves any artificial nest for the grass of some neighbouring coppice, when she lays under the branches of a shrub, in a well concealed situation. When the eggs of the pea-hen are gathered in sufficient numbers, whether from a natural or an artificial nest, it is a common practice to place them under an ordinary hen, which hatches them in thirty days, and makes an excellent step-mother to the young chicks. These are very tender at first, but they soon grow vigorous. Barley-meal paste, mixed with curd or cheese prepared from milk, alum, ant's eggs, meal-worms, and hard-boiled egg, are among the common articles of diet given to the young. The grown-up pea-fowl feeds on boiled barley or other common grains, and is a dangerous neighbour to corn-fields or gardens. On the other hand, they are voraciously fond of such creatures as frogs, lizards, and the like, and keep grounds clear of such annoyances. In moulting time it is requisite to be more careful of these fowls than at other times, and to give them good grain, with a little honey and fresh water.

PEA-FOWL, TO DRESS.—See GUINEA-FOWL.

PEAR, CULTURE OF.—The pear requires a good, naturally rich, loamy soil, not however enriched by artificial means, as that would only have the effect of producing a luxuriance of growth that would require much skill and labour to overcome. The pear is cultivated in a variety of forms, according to the hardness or tenderness of the kind; and the sorts are chosen most suitable to the purposes for which they are intended. Grafting is the usual mode, and for this purpose two distinct kinds of stocks are used, the one called the free stock or wild seedlings, the other the quince. The first is the most proper for the orchard pear, as this produces much larger trees; the latter is best adapted in general for espaliers, walls, and pyramidal trees in gardens. In planting the pear on quince stocks, it is necessary that the stock should be covered up to its junction with the graft, and, if the soil is not extremely wet, the tree may be planted in the usual manner, so that the upper roots are on a level with the surface of the soil. But with pear trees on the quince it is necessary to form a mound of compost, above half-rotten manure and earth, mixed in equal quantities, which must cover the stock up to the junction of the graft to the letter *a* in the engraving; and this is made of rich compost in order to encourage it to emit roots into the surface soil, and to keep it from becoming hard and bark-bound. To make this emission of roots



more certain, the stem may be tongued, that is, the bark must be cut through upwards from the root, and a slip about one inch in length raised, as seen at *b b b b*. These pieces of bark must be kept open, by inserting a piece of broken flower-pot or slate. Several of these tongues may be made, and by the end of the first year after planting, every incision will have emitted roots; the stock, owing to its being kept continually moist, will swell and keep pace with the graft, and the tree will flourish and remain healthy. Budding is performed precisely as for other

fruits, and for the same purpose as grafting. By this course, however, one year or nearly so may be considered lost, in point of time. Seed is resorted to either to produce stocks or to raise new kinds. The seeds should be washed from the pulp when the fruit is fully ripe, dried and preserved as other seeds, and sown in February following. When it is wished to expedite the process, for the sake of gaining time, with fancy seedlings, the young plants may be sown and reared in a moderate bottom warmth, sowing in January or February, potting off the plants when up, and hardening them off by the beginning of June, when they may be planted out in a warm spot. The best way to prove such seedlings is to plant them on a good bearing old tree, on a quince stock if possible; they will thus fruit in half the time. During the growing period, the chief point is to keep down the watery spray, which is generally produced in abundance. Caution must be exercised in not doing this too early, or the embryo blossom buds may be driven into growth. The best practice is to commence by disbudding in the beginning of May. All gross foreright shoots are stripped away, and several of the more luxuriant shoots when too thick. In a few weeks the shoots begin to lengthen considerably, and their character as to fruitfulness is in some degree determinable. Very few of our pears bear on wood of the previous year, but a great many shoots plainly show betimes that their tendencies are towards fructification; such should be by all means encouraged. About Midsummer a selection may be made; most of those which look browner than the rest, and are shorter jointed, must be reserved; and much of the paler, longer-pointed, and more succulent-looking spray may be cut or pinched back, leaving about four inches at the base. Those reserved are tied down to the older branches, sometimes in a reverse position. In about a month from this operation, the points are pinched from nearly all the growing shoots; this should be done about the middle of August, and it has a tendency to cause the wood to become highly solidified, and thus induces fruitfulness. After this period, the only point is to pinch the extremities of all succulent spray which may arise. When the summer culture of the pear is properly attended to, but little is left for the winter primer. Nevertheless, there is still something to do; some shoots will have escaped the summer dresser, and many "snags" must be cut entirely away. Most of those which had been pinched back to three inches at Midsummer, or after, must be pruned entirely away. No stump or spur must be left, unless a blank space occur. These snags removed, the young shoots tied or nailed down must be examined, and the superfluous ones cut away. Those reserved must be tied down on the old stems, or nailed between them, and little more is necessary until the growing period returns. The conditions requisite for storing are a rather cool room, and one that is dry. The precise temperature is not quite certain, as it probably differs some-

what in different kinds. The safest would be from 55 to 60 degrees, not more than the latter. It is a common remark that the apple and pear bear well, and the reverse in alternate years. The cause of this, for the most part, is allowing the trees to exhaust themselves, by carrying more fruit in one season than they can well bring to full maturity. The trees become greatly weakened, and the extraordinary draught made by their roots upon the soil in which they grow extracts from it all, or nearly all, the food it contains suitable for their existence.

PEAR JELLY.—Peel and cut ripe pears into quarters, and boil them into a marmalade with water; then pass the marmalade through a sieve, so as to leave only the juice, and boil it with sugar in equal portions. When it has become sufficiently thick by boiling, put it into glasses and cover it.

PEAR MARMALADE.—Take ripe pears of good quality, and having peeled them, boil them until they are quite soft; press them through a sieve, and put the marmalade over the fire. When it becomes thick, moisten with syrup, and add powdered sugar in such proportion that the whole quantity of sugar employed may be equal to one pound for a pound of fruit. The sugar and fruit are to be made quite hot, and stirred frequently, taking care, however, never to pass the state of simmering. When it is thoroughly beaten, and of a proper consistency, put it into pots in the usual way.

PEARS BAKED.—The pears employed for baking are those of a hard green kind. Wipe, but do not pare them; lay them on tin plates, and bake them in a slow oven. When soft enough to bear it, flatten them with a silver spoon; and when quite done, serve them in a dish with pounded sugar.

PEARS PRESERVED.—Take pears when not too ripe, and set them over the fire in a sufficient quantity of cold water, letting them simmer but not boil. When they are sufficiently softened to yield readily to the pressure of the finger, take them out, peel them carefully, prick them with a pin, and put them on again in fresh water, with the juice of a lemon; let them boil rapidly, and when they are sufficiently done, so that a pin will pass readily through them without the least resistance, take them out, and put them into cold water. In the meantime, have ready some hot thick syrup, and having well drained the pears, pour it over them. Let them stand for twenty-four hours, and then give them a gentle boil. Take them again out of the syrup, and dip them in cold water; after which, pour hot syrup upon them, and when they have stood three days, give them another boil; when cold, take them out, drain them, and put them into bottles; then thicken the syrup by a few boilings, and add an equal quantity of brandy. Filter the liquor through a bag, pour it over the fruit, and tie down the bottles.

PEARS STEWED.—Peel, and divide into halves or quarters, large pears, according to their size; throw them into water as the skin is taken off, before they are divided, to

prevent their turning black. Pack them round a block-tin stewpan, and sprinkle as much sugar over them as will make them moderately sweet; add lemon-peel, a clove or two, and some bruised allspice; just cover the fruit with water, and add a little red wine. Keep them closely covered, and stew them for three or four hours; when tender, take them out, and strain the liquor over them.

PEARL.—The most beautiful and costly pearls are obtained exclusively from the pearl oyster of the Indian seas. An inferior description of pearl is procured from a fresh-water shell-fish in the rivers of Ireland and Scotland.

PEARLASH.—A preparation produced from the ashes of burnt vegetables. It is employed in the laundry for the same purposes as soap. It is also very useful in softening hard water. It may be employed for scouring the rougher kind of woodwork, kitchen fixtures, &c., and also for cleaning the lids and insides of saucepans.

PEARL POWDER.—Take four ounces of the best magistry of bismuth, two ounces of starch powder; mix them well together, put them into a funnel-shaped glass, pour over them a pint and a half of proof spirit, and shake them well; let them remain a day or two. When the powder falls to the bottom, pour off the spirit, leaving it dry; then place the glass in the sun, to evaporate the moisture. Next, turn out the white mass, the soiled portions of which form the top, whilst the pure ingredients remain at the bottom. If there be any dirty particles, scrape them off, and again pulverize the remaining part of the cake, and pour more proof spirit over it. Proceed as before, and if there be any moisture remaining, place the cone on a large piece of smooth chalk, to absorb its moisture. Cover the whole with a bell glass, to preserve it from dust, and set it in the sun to dry and whiten. Next grind the mass with a muller on a marble slab, and keep the powder in a glass bottle, seamed by a ground stopper.

PEAS BOILED.—Scrub and wash them, then drain them in a cullender, and put them on in boiling water, with a tablespoonful of salt; boil till tender, and serve in a dish in which a piece of butter has been put. A bunch of mint is usually boiled with them. The saucepan should not be covered while peas are boiling; and immediately they are done they should be strained from the water, otherwise they will lose their colour.

PEAS, CULTURE OF.—Of this leguminous plant there are several varieties, but a great sameness about many of the early kinds. One good variety is all that is required in a small garden; and for one containing all the good qualities of the pea, the *Early Conqueror* is the best. The *Early Warwick*, *Prince Albert*, *Danecroft Rival*, and *Shilling's Grotto* are also all good well-known peas, where variety is required. One quart of an early variety of pea is quite sufficient for sowing a row of a hundred feet in length; half a pint less sown in the same distance of the blue varieties, and one pint of the large stalk kinds, are sufficient where the

soil is rich, well pulverized, and pretty free from slugs. The soil in which this vegetable most luxuriates is a free, light, but rich loam, abounding in vegetable matter, but not manured with recent dung. The situation for crops, from June to August, should be exposed and open. The times of sowing are very various. To try for a crop as early as possible, sow of the sort preferred a small portion on a sheltered south border, or other favourable situation, at the close of October, or in the early part of November. Follow with another sowing in December, so that if the former be casualty cut off, the latter may have a better chance to flourish; and if both survive the frost, they will succeed each other in maturity in May and June. At whatever season sowing is commenced, a better general rule cannot be adopted than to sow for a successional crop as soon as the peas of the preceding sowing are fairly above the surface. Sow in drills, or by the dibble in rows, at a distance proportionate to the height which the variety attains, as well as according to the season. Dwarfs at two feet for the early and late crops, but three feet for the main ones. Marrowfats at three and a half or four and a half feet; Knight's marrowfats, and other gigantic varieties, at six or eight feet. Peas not intended to be supported require the least room. At the early and late sowings the seed should be buried an inch deep, but for the main crops an inch and a half. The distances apart in the rows should be—of the dwarf, two in an inch; middle-size varieties, three in two inches: and the latter kinds an inch apart. The best mode is to sow in single rows, ranging north and south, and the sticks alternately on each side of the row. If the rows range east and west, put the sticks on the south side. When the summer sowings are made, if dry weather is prevalent, the seed should be soaked in water for two or three hours previous, and the drills well watered. When the plants have advanced to a height of two or three inches, they are to be hoed, and earth drawn around their stems. This should be done twice or thrice as they ascend, previous to the sticks being placed. Early crops should be protected during hard frosts, by dry straw, or other light litter, laid upon sticks or brushwood; but remove the covering as soon as the weather becomes mild. If in April, May, and the course of summer, continued dry weather occurs, watering will be necessary. All peas fruit better for sticking, and continue longer productive, especially the larger sorts. Stick the plants when from six to nine inches high, as soon as they begin to vine. Too much care cannot be taken when the pods are gathered, not to injure the stems: and if cut off with the scissors, the plants will produce one-fourth more than when roughly gathered from. The more regularly plants are gathered from, the longer they continue in production, as the later pods never attain maturity if the earlier ones are allowed to grow old before they are gathered. To obtain seed, leave some rows that are in production during July, or sow purposely in March: care must

be taken, however, that no two varieties are in blossom near each other at the same time. The plants intended for seed ought never to be gathered from. When in blossom, all plants which do not appear to belong to the variety among which they are growing, should be removed. They are fit for harvesting as soon as the pods become brownish and dry. When perfectly free from moisture, they should be beaten out, otherwise, if hot showery weather occurs, they will open and shed their seed. The forcing of peas commences in December, in the early part of which month they may be sown in a hot-bed, to remain, or thicken to transplant, during the succeeding month, into others for production. These may be repeated in January, and the planting takes place in February. It is also a common practice to sow in a warm border during October, and the plants being cultivated as a natural ground crop, are removed into a hot-bed during January. The hot-bed must be moderate, and earthed equally over the depth of six or eight inches with light fresh mould, not particularly rich. The seed must be buried an inch and a half deep. The frame, which is required to be two feet and a half high behind, and one and a half in front, ought to be put on three or four days before the crop is sown, that the steam and heat may abate. Seed may likewise be sown at the above times in pots or pans, and placed round the basis of the stove. At the close of September, also, some peas may be sown in pots, and sunk in the earth of any open compartment: when the frost commences, to be removed into the greenhouse. A border of fresh earth being made in the front of it early in December, the plants are removed into it in rows two feet asunder, or, still better, in pairs, with ten inches interval, and two feet and a half between each pair. These will come into production about the middle of March. In every instance, as stated above, the rows should be two feet, the seed or plants being set an inch asunder. The plants are ready for removing when an inch or two high. They must be shaded and gently watered until they have taken root. As much earth should be preserved about the roots at the time of removal as possible. Transplanted peas are most productive, and run the least to straw in the forcing frames. Air must be admitted as freely as circumstances permit: the same precautions being necessary for cucumbers. Water must be given at first sparingly, otherwise decay or super-luxuriance may be occasioned; but when they are in blossom, and during the succeeding stages of growth, it may be applied oftener and more abundantly, as is necessary for the settling and swelling of the fruit. The shading during hot days, and the covering at night, must also be particularly attended to. From three to five months elapse between the time of sowing and production, according to the fineness of the season, length of the days, &c. The temperature may be uniformly kept up throughout their growth, having fifty degrees for the minimum at night, and seventy for the maximum by day.

PEAS, DIETETIC PROPERTIES OF.—The amount of nutritive matter which peas contain, is far beyond what is found in any of the cereals, being as 44 or 50 to 100 of wheat flour. The nutritive effect, however, does not agree with this theoretical conclusion, partly from their deficiency in other wholesome constituents, partly from the difficulty with which they are digested, and the flatulence and constipation which they occasion, as well as from the acidity they are said to communicate to the blood.

PEAS PUDDING.—Take a pint of split peas and allow them to remain in water the whole night previous to their being used; then take them out and put them loosely into a cloth, so as to allow them to swell; boil them for four hours or until they are quite tender, then rub them through a cullender, so as to render them perfectly smooth; add to the pulp a lump of butter and some salt; after being well mixed, put the peas again into a cloth, tie tightly, and boil for about half an hour. This pudding is usually eaten with boiled pork or boiled beef.

PEAS SOUP.—There are various ways of making this well-known and agreeable soup. The following are among the most approved recipes:—1. Save the liquor of boiled pork or beef: if too salt, dilute it with water, or use fresh water only, adding the bones of roast beef, a ham or gammon bone, or an anchovy or two. Simmer these with some good whole or split peas; the smaller the quantity of water at first the better. Continue to simmer till the peas will pulp through a cullender; then set on the pulp to stew—with more of the liquor in which the peas were boiled—two carrots, a turnip, a leek, and a stick of chopped celery, till all are quite tender. When ready, put into a tureen some fried bread cut into dice, dried mint rubbed fine, pepper and salt, and pour in the soup. 2. Wash a quart of split peas, and put them into a cloth; when boiled tender, rub them through a sieve into six quarts of boiling stock; take six onions, two bay-leaves, an ounce of allspice, three sprays of thyme, or three of marjoram; put them all into a stewpan with an ounce of butter, until they are of a brown colour; put them into the stock, and boil for ten minutes; then strain it through a sieve, and let it boil ten minutes more; serve with mint, and with toast cut into squares. 3. Put into a pan six pounds of pork, well soaked and cut into eight pieces, pour six quarts of water over it; add a pound of split peas, a teaspoonful of sugar, half a teaspoonful of pepper, and four ounces of fresh vegetables; let these boil gently for two hours, or until the peas are tender. Strain through a sieve and serve. 4. Wash a quart of split peas, which put into a stewpan with half a pound of streaked bacon, two onions sliced, two pounds of veal or beef, cut into small pieces, together with a little parsley, thyme, and bay-leaf; add a gallon of water, with a little salt and sugar, place it upon the fire, and when boiling, stand it at the side until the peas are boiled to a pulp, and the water is reduced to one-

half; then take out the meat, put it upon a dish, to be eaten with the bacon, keeping it hot in the meantime, rub the soup through a hair sieve, put it into another stewpan, and when boiling, serve. 5. Put a pint of split peas into four quarts of water, with two ounces of butter, three pounds of beef, one pound of crushed bones, and a knuckle of ham, or half a pound of good bacon; add two carrots, three turnips, a head of celery, four onions, and a seasoning of salt and pepper; boil for about three hours; then crush the pulp from the peas, through a sieve, and serve it up, making of the meat a separate dish, if desired. 6. *Green peas soup.* Put two quarts of green peas into a stewpan with a quarter of a pound of butter, a quarter of a pound of lean ham cut into small dice, two onions sliced, and a few sprigs of parsley; add a quart of cold water, and rub all well together; then pour off the water, cover the stewpan close, and set it over a brisk fire, stirring the contents of the stewpan round occasionally; when very tender, add two tablespoonfuls of flour, which mix well; in mashing the peas against the sides of the stewpan, add two quarts of stock, a tablespoonful of sugar, and a seasoning of pepper and salt; boil all well together for five minutes, then rub it through a tammy or hair sieve; then put it into another stewpan with a pint of boiling milk; boil for five minutes, skim well, and pour it into a tureen: serve with toasted bread cut into squares.

PEAS STEWED.—Make a light broth and dress the peas in it for a few minutes, moistening them from time to time with hot water; then add salt and pepper, two or three onions, a little parsley and chopped lettuce; let them reduce gently, until the peas are thoroughly done; and before serving, thicken with the yolks of two or three eggs, taking care that the mixture does not boil after the eggs have been put in, lest it should turn.

PEAS, TO PRESERVE.—Gather the peas before sunrise, shell them immediately, and throw them into boiling water; when they have had one good boil, take them off; and when cold, spread them thinly over a wire sieve. Place the sieve for six hours over hot wood ashes, or over a very slow charcoal fire, so as to dry them gradually, and then put into hottles, corking them carefully. In this way they will keep fresh till winter.

PEAS, WITH MILK AND SUGAR.—Put a quart of very young peas into water, with a piece of butter; boil them; then crush them with the hand, and let them drain in a cullender; then put them in a stewpan over a brisk fire, with a little salt, pepper, and sugar, and a small quantity of parsley; moisten from time to time with boiling water, taking care to shake them frequently; and when they are nearly dry, beat up the yolks of three eggs with some cream or good milk, and stir it well into the stewpan, until it has become sufficiently thick.

PEAT.—A collection of vegetable remains commonly accumulated in masses, either on the surface of the earth, or in strata at various depths. It contains elements for

the formation of the richest manure, when substances are added to it to decompose the tannic acid, and hasten the decomposition of the vegetable matters, such as lime or marl. Peat has not been found, when used alone as manure, to possess any fertilizing qualities, as might be expected from its nature; but it has been advantageously employed as a mixture with compost. Such magazines of almost neglected matter as peat affords, might be advantageously employed by being transported to light sandy or gravelly soils, in which there is a great deficiency of vegetable matter. The ashes, also, form valuable stimulants, and assist in the germination of seeds on all, but more especially on strong clayey soils. Celery, potatoes, and carrots, are almost the only garden crops that seem to prefer an improved peaty soil. Fruit trees seldom succeed in such.—See MANURE.

PEN.—The steel pen is now almost universally employed for the purposes of writing. They may be procured at the lowest possible prices, and require little or no care. Leaving them embedded in shot when not in use, prevents them corroding.

PENCIL.—In this writing implement, as in the pen, many improvements have been latterly introduced. A species of pencil-case has been recently invented, with a peg moving in a spiral form, by which the lead is protruded or withdrawn readily; this is a great improvement on the old-fashioned pencil-case. The degree of hardness or softness which characterizes different sorts of drawing pencils, is denoted by certain distinguishing letters stamped into the wood of the pencil; thus H, hard, for ordinary architectural, geometrical, or latticed drawing; HH, harder, for the finer arts of these; HHH, hardest, for drawings upon wood; HB, hard and black, for ordinary sketches; B, black rather than hard, for shadows to the preceding; BB, very black, for the deepest shadows.

PENK.—See MINNOW.

PENKNIFE.—A knife so called for the use formerly assigned it of making and mending pens. It is now carried about the person, as a useful little implement to be employed for numerous offices, and is found of great use in many emergencies.

PEN WIPER.—A useful little implement employed for wiping the pen upon, after writing with and previous to putting it away. They may be made of the odds and ends of any materials, and designed in any fanciful form.

PENNY-ROYAL.—A well-known perennial plant that is found growing wild on marshy commons, and about the margins of small brooks. It is cultivated chiefly on account of its use in culinary and pharmaceutical preparations. It is a plant which grows best on a tenacious soil; even a clayey is more suitable than a light silicious one. It should be moderately fertile, entirely free from stagnant moisture, and consequently on a dry subsoil or one well drained. A border or other situation, which is sheltered from the mid-day sun, is always to be allotted to them, as in such they are most

vigorous and constant in production. The plant is propagated by parting the roots in February or March, September or October, and by slips or offsets at the same season.

PEPPER, USES AND PROPERTIES OF.—Peppers are of various kinds, but have nearly the same properties in modified degrees. Those used chiefly in Europe are the black and white pepper. Domestic pepper is one of the most wholesome and useful of spices. With persons in ordinary health, it has the effect of stimulating the stomach gently to the performance of its functions; and is peculiarly serviceable to persons who are of cold habit, or who suffer from a weak digestion. But in inflammatory habits, and where affections of the mucous membrane exist, its effects are highly injurious. As a medicine, it is often serviceable in nausea, vomiting, chronic diarrhoea, and ague.

PEPPERMINT CORDIAL.—To make five gallons of this cordial, take three and a quarter gallons of rectified spirit, three pounds of loaf sugar, a gill of spirit of wine, four pennyweights of oil of peppermint; fill up the cask with water until the quantity becomes five gallons; rouse it well, and set the cask on end.

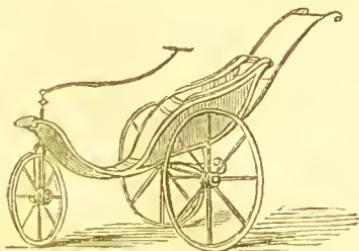
PEPPERMINT, CULTURE OF.—See MINT.

PEPPERMINT DROPS.—Pound and sift a quarter of a pound of double-refined sugar, and beat it with the whites of two eggs till perfectly smooth; add sixty drops of oil of peppermint, beat it well, drop it on white paper, and dry it at a distance from the fire.

PEPPERMINT LOZENGES.—Take two pounds of loaf sugar, two ounces of fine starch, and a few drops of essence of peppermint; mix these ingredients with gum tragacanth; form into drops, and bake.

PEPPERMINT WATER.—Take of the herb of peppermint, dried, a pound and a half, and as much water as will prevent it from burning; after seething, distil off a gallon, and bottle for use.

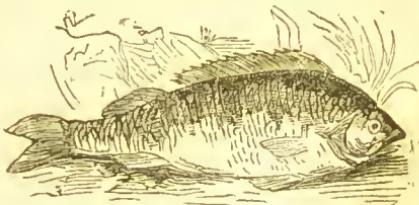
PERAMBULATOR.—One of the most useful inventions of the day, and a great improvement on the clumsy four-wheeled vehicle in which children were formerly drawn. These carriages are made of a variety of forms, and at all sorts of prices;



sometimes, however, serious defects exist in their construction, and this should be attended to previous to purchasing. It is necessary that both the hind wheels, and that in front, should be attached by springs, or the jolting on rough roads

will be too great for young children. If these springs are badly attached, they are constantly breaking; but by a slight improvement on the common construction, this is easily remedied. This contrivance consists in attaching the hind axle to the body by a leather strap, so as to prevent a strain upon the spring, which the opposition of a large stone or other impediment frequently occasions. The adaptation to the cheapest kind of spring used is shown in the engraving. The propelling of the perambulator is extremely simple; the chief things to be attended to are to depress the handle slightly when going over rough roads, so as to raise the front wheel from the ground, and lessen the jolting motion; and to observe the same precaution when turning the vehicle, otherwise the front wheel will be soon worn out. The great advantage of the perambulator is, that it permits children to be out in the open air, and constantly on the move, without subjecting the nurse to any fatigue. It is as well, however, to lift the children out occasionally and allow them to exercise their limbs until they feel tired, when they can be placed in the perambulator again. In cold weather, this is especially necessary, as children being subjected to the exposure of the keen air in a state of inactivity, are liable to be attacked with cramp, rheumatism, and other painful affection. It is a common practice with nursemaids to wheel their young charges to a certain spot, and to leave them sitting in their perambulators by the hour together, so that they may be spared the trouble of looking after them, and enjoy their gossip uninterrupted. Mothers should put a stop to this cruel practice by accompanying the children themselves as frequently as they can; or by making unexpected visits to the place where the children are usually taken.

PERCH.—A very handsome and daring fish, considered by many a great delicacy; it has two pectoral fins, the first longer than the second; its colour is sometimes a yellowish and sometimes a blackish green on the back and sides, according to the water it



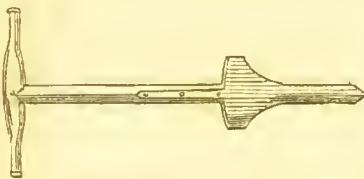
inhabits, with transverse bands of black, belly white; its caudal, ventral, and anal fins are red, and its irides golden—"The golden-eyed perch, with fins of Tyrian dye." The perch is hog-backed, and the first dorsal fin is armed with strong sharp spikes, capable of being erected at will into a bristling *chevaux-de-frise*, thus serving as a defence against the attacks of the pike or trout, or even its larger brethren. Its size varies

from one inch to a foot or fifteen inches, and its weight from one ounce to four or five pounds, although fish of that weight are seldom met with. The perch spawns at the end of April or beginning of May, depositing it upon weeds, or the branches of trees or shrubs that have become immersed in the water; it does not come into condition again until July. The best time for fishing for perch is from September till February; it haunts the neighbourhood of weirs, heavy deep eddies, camp sheathings, beds of weeds with sharp streams near, and trees or bushes growing in or overhanging the water. The baits for perch are, small gudgeons, loach and minnows, red, marsh, brandling or lob worms, gentles, shrimps, caddis and straw-bait. The tackle should be fine but strong, as with a fish bait a trout or pike may frequently be hooked. Many fine perch are taken with the paternoster tackle while fishing for gudgeon, to the shoals of which, drawn together by raking the gravel, they are attracted. Perch, unlike fish of prey, are gregarious, and in the winter months, when the frosts and floods have destroyed and carried away the beds of weeds, congregate together in the pools and eddies, and are then to be angled for with greatest success from 10 to 4 o'clock, at the edge of the streams forming such eddies.

PERCH, TO DRESS.—See CARP.

PERCUSSION CAP.—An explosive agent in connection with fire-arms, used in place of the flint lock. The explosive power of a good percussion cap is not affected by immersion in cold water, even during several days; nor by exposure to a moist atmosphere for any length of time.

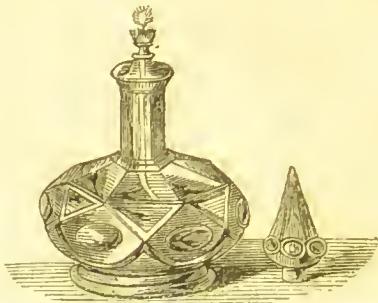
PERFORATOR.—An agricultural implement chiefly used as a substitute for the spade, in planting young tap-rooted trees in rough ground. In using it, one man em-



ploys the instrument, while another man or boy holds a bundle of plants. The man first inserts the instrument in the soil, folding it up for the reception of the plant; round which, when introduced, he inserts the iron several times, in order to loosen the soil about the roots; then treads down the turf, and the plant becomes as firmly set in the ground as if it had been long planted.

PERFUME LAMP.—Apartments may be greatly perfumed in the following manner. An ordinary spirit lamp is filled with Hungary water, or other scented spirit, and trimmed with a wick in the usual manner. Over the centre of the wick, and standing about the eighth of an inch above it, a small ball of spongy platinum is placed, maintained in its position by being fixed to a thin glass rod, which is inserted into the

wick. Thus arranged, the lamp is to be lighted and allowed to burn till the platinum becomes red hot; the flame may then be blown out, nevertheless, the platinum continues to glow for an indefinite period. The



proximity of a red-hot ball to a material of the volatile quality of scented spirit diffused over the surface of a cotton wick, as a matter of course causes its rapid evaporation, and, as a consequence, the diffusion of odour.

PERIWINKLE.—A well-known small shell-fish, of little importance as an article of food, and of average wholesomeness when not eaten to excess; the horny excrescence which surrounds the head should be scrupulously avoided.

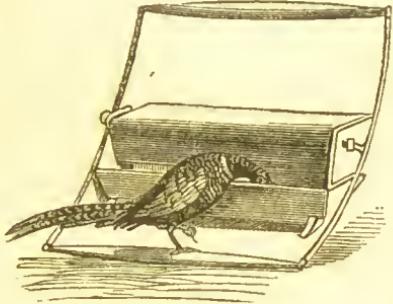
PERRY.—A beverage made from pears. The fruit used for this purpose should contain a large proportion of sugar, and be likewise astrigent, or the liquor from it will be acetous when it ceases to be saccharine. In the making of perry, the pears are pressed and ground in precisely the same manner as apples are in the making of cider. The method of fermenting perry is nearly the same as that for cider; but the former does not afford the same indications as the latter by which the proper period of racking off may be known. The thick scum that collects on the surface of cider rarely appears in the juice of the pear, and during the time of the suspension of its fermentation, the excessive brightness of the former liquor is seldom seen in the latter: but when the fruit has been regularly ripe, its produce will generally become moderately clear and quiet, in a few days after it is made, and it should then be drawn off from its grosser lees. In the after-management of perry, the process is the same as that of cider; but it does not so well bear situations where it is much exposed to change of temperature. In the bottle it almost always retains its good qualities, and in that situation it is always advisable to put it, if it remain sound and perfect at the conclusion of the first succeeding summer.

PESTLE.—An implement used with the mortar sometimes with a beating or hammering action; but more generally it is used to grind or triturate, whilst firmly grasped. For simply mingling powders, a lighter hold by the forefinger and thumb is quite sufficient.

PETTICOAT.—An under-garment of female attire, made of various materials. They may be converted from dresses, when they are past duty in that capacity. Delicate females should never fail to wear a warm kind of petticoat during the inclement weather, in order that their limbs may not be visited with rheumatic and other affections, nor their general health injured.

PEWTER, TO CLEAN.—Pewter articles should be washed in hot water with ashes or fine silver sand, and then polished with a cloth or leather; this process will restore pewter articles to their pristine brightness.

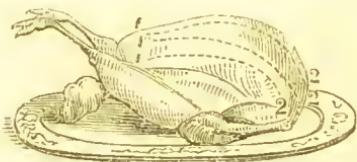
PHEASANT.—There is great difficulty in taming this bird, owing to its shyness; with great attention, however, they may be brought up with the common poultry, and regularly domesticated. They may be taught to come to the keeper's whistle, and feed from his hand. To fall in with the habits of this bird, a pheasant feeder, as seen in the engraving, might be placed in



some convenient but rather retired spot, which would not only keep them together but might attract any other stray pheasants also towards themselves, and breed with the party. When first hatched the pheasant should be fed with hard boiled eggs, crumbs of bread, and lettuce leaves, well mixed, with an addition of the eggs of meadow ants. At this tender age, two precautions are necessary, namely, never to allow them any drink, nor carry them abroad until the dew is entirely off; and that their food be given frequently and in small quantities, beginning at day-break, and always mixing it with ant's eggs: the place must be kept extremely clean, and they should be taken in before sunset. In the second month, nutriment more substantial may be given, such as eggs of the wood-ant, wheat, barley, ground beans, wood-lice, earwigs, and other small insects, to make a variety; and the intervals between the meals may be gradually prolonged. At this time they begin to be subject to vermin; place small heaps of dry earth or fine sand, by tumbling and rubbing in which they will soon rid themselves of the painful itching occasioned. Water must also now be given frequently, and always clean, or the pip may be contracted. The third month is attended with

new diseases; the tail feathers then drop, and others appear. Eggs given moderately are efficacious in combating this trying complaint, and lessening the danger. The younglings may now be carried into the field, when the colony is to be dispersed: if white clover grows in it, the pheasant chicks will pick the seeds out of the heads, and it will wonderfully strengthen them: they must also at first be fed in the field with some favourite food, diminishing the quantity daily, and thus by degrees constraining them to provide for themselves.

PHEASANT, TO CARVE.—Fix the fork in the centre of the breast, twist it down in the direction 1—2; remove the leg by cutting



it in a sideway direction, then take off the wing, without interfering with the neck-bone. When the legs are taken off, cut slices from the breast. Separate the merrythought by passing the knife under it low, and the neck. The breast, wings, and merrythought are the favourite parts, particularly the former; the leg has a higher flavour.

PHEASANT, TO CHOOSE.—The cock bird is considered the choicest, except when the hen is with egg. If young its spurs are blunt and short, or round; if they are long and sharp, the bird is old. Examine the hen at the vent; if that is open and green, it is a sign she is stale; if she is with egg, it will be soft; if stale, the skin, when rubbed hard with the finger, will peel off.

PHEASANT, TO DRESS.—See PART-RIDGE.

PHOTOGRAPHY.—Books: *Snelling's Journal*, 18s.; *Hardwick's Chemistry*, 6s. 6d.; *Palmer's Manipulation*, 1s. 6d.; *Bede's Pleasures*, 7s. 6d.; *Delamotte's Practice*, 4s. 6d.; *Cundall's Primer*, 1s.; *Hockin's Processes*, 6s.; *Hill's Researches*, 8s. 6d.; *Shaw's Studies*, 16s.; *Baxter's Treatise*, 1s.; *Wilson's Collodion Process*, 1s.; *Collins's Handbook*, 1s. 6d.; *Snelling's History and Practice*, 5s.; *Thornthwaite's Guide*, 3s. 6d.; *Bingham's Instructions*, 2s. 6d.; *Photography made Easy*, 1s. 6d.; *Hunt's Manual*, 6s.; *Whittock's Manual*, 1s.; *Practical Manual*, 1s.; *Hogg's Manual*, 1s.; *Humphrey's System*, 9s.; *Hunt's Treatise*, 3s. 6d.; *Orr's Photographic Art*, 5s. 6d.; *Sutton's Handbook*, 2s. 6d.; *Delamotte's Oxymel Process*, 1s.; *Hart's Photography Simplified*, 1s. 6d.; *Cooke's Waxed Paper*, 2s.; *At B C*, 1s.; *Sutton's Dictionary*, 7s. 6d.

PHRENITIS, OR INFLAMMATION OF THE BRAIN.—This is a disease that never arises without some strong or well-defined cause, and this may be either external and accidental, or internal or symptomatic. Of the external causes the most frequent are, injuries applied directly to the head, a sun

stroke or exposing the uncovered head for a length of time to the heat of the sun, the sudden application of cold, or intense pain and nervous irritation consequent on scalds or burns. The internal causes are, a high degree of fever, long habits of intoxication, or inebriation occurring in a man of sober habits and excitable temperament, sudden and violent passions, such as rage; close and long continued study, the sudden suppression of discharges to which the system has become habituated; and sometimes from crude and poisonous substances taken into the stomach. The symptoms which characterize this dangerous disease are, a sense of fulness, amounting to distension in the head, hot flushed or red countenance, throbbing of the arteries on the temples, drumming noises in the ears, inflamed and eager look of the eyes, restlessness, loss of sleep, and a quick, full pulse. Sometimes these symptoms are attended with pains in various parts of the body, especially in the head, and tremors of the hands and feet. As the disease advances, the pain increases, the face assumes a square appearance, and the eyes and features a sharp fierceness particularly defiant; the patient talks loud and incessantly, is easily moved to rage, the eyes become very red, and a delirium follows, at times reaching to a state of frenzy. The face then becomes swollen, the eyes start, as if about to protrude, the breathing is hard and short; light, and the slightest noise violently affects him; and to his ungovernable fury is added a hard, sharp, and bounding condition of pulse. In inflammatory fever, the head is often violently affected, but this symptomatic state of mental derangement may always be defined from phrenitis, by the absence in that case of the *especial symptoms of the head*, which though they may occur, are secondary, and not as in inflammation of the brain, primary; the pulse, too, in the former, is strong, hard, and full from the first; whereas it only becomes so in the latter as the disease advances.

The treatment of phrenitis, till within a very short time, consisted in copious bleedings from the system by the lancet; from the temples by leeches, and the back of the neck by cupping; shaving the head, and the application either of a large blister, or applying bladders filled with ice, and by the employment of the most potent and rapid cathartic medicines; thus, by a general system of depletion, as rapidly as possible to reduce the action of the heart, and prostrate the patient by the exhaustion consequent on such violent drains opened from the system, thereby pulling down the physical powers from an excess of tension to a state of helpless relaxation. These violent and often criminal means have, however, now merged into a more rational practice, and though bleeding and blistering are often imperative, there is no necessity to carry them to such an extent, as by the means of opium and antimony, the same state of prostration can be obtained without the vital loss to the system, which is the result of excessive bicinging, and

even in cases where opium cannot be employed, the substitution of digitalis will effect the same results. In the earlier stages, where the patient is very restless, the symptoms are urgent, and the constitution robust, it may be necessary to bleed to the amount of twelve or fourteen ounces; following up that measure by the pills and mixture prescribed below; at the same time keeping the patient in a dark, cool room, and avoiding all noise, or subjects likely to excite or disturb him. *Pills.* Take of

Compound extract of	
coccygynth	15 grains
Calomel	12 grains
Croton oil	2 drops

Mix, and divide into three pills; one to be given every two hours till they act effectually. *Mixture.* Take of

Powdered nitre	20 grains
Tartar emetic	2 grains
Water	6 ouuces

Dissolve, and add—

Tincture of digitalis . . .	$\frac{1}{2}$ drachm
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Mix, and give two tablespoonsfuls every three hours. Concurrent with this treatment, the hair should be very much thinned, and the following lotion kept constantly on it, or else an ox bladder, half filled with powdered ice, applied to the head, and frequently renewed as it becomes warm. *Lotion.* Take of

Muriate of ammonia or	
sal ammoniac	$\frac{1}{2}$ ounce

Powder, and dissolve in a quart of cold water, and add

Powdered nitre	1 drachm
Sulphuric ether	$\frac{1}{3}$ ounce

Mix; clothes well wetted with this lotion are to be kept constantly to the head. The feet at the same time should be kept hot, and when it is necessary to produce sleep, give twenty-five drops of Batty's solution of opium, or a pill composed of one grain of solid opium. Should the symptoms in the head continue unsubdued, a few leeches may be applied to the temples, or a blister laid on the neck from the nap of the neck to the shoulders.

PHRENOLOGY.—Books: *Combe's Treatise*, 15s.; *Hodgson's*, 5s. 6d.; *Slade's*, 7s. 6d.; *Sidney Smith's*, 5s. 6d.; *Rogier's*, 12s.; *Fowler's Applied*, 1s.; *Catechism*, 1s.; *Christian*, 1s.; *Combe's Elements*, 3s. 6d.; *Sewell's Examination*, 3s.; *Tyas's Handbook*, 1s.; *Combe's Lectures*, 6s.; *Spurzheim's Outlines*, 2s. 6d.; *Philosophy*, 3s. 6d.; *Wilson's Statistics*, 5s.; *Science*, 1s.; *Thoughts on*, 3s.; *Bridges*, 3s. 6d.

PIANOFORTE, CHOICE AND CARE OF.—In selecting a piano, care should be had in the first place, that it harmonizes externally with the remaining portion of the furniture in the midst of which it is to be placed. The size of the room, and the space where it

is to be lodged, must also be taken into consideration. It would be preposterous to force a very large piano into a small room, and it would be equally absurd to place a very small piano in a large and lofty apartment. When purchasing a piano, the object should not be to select the cheapest, but the best; sometimes they may be met with at a comparatively low price in sales by auction. To judge of the power and tone of the instrument requires some practical acquaintance with it, and where this is wanting, the intending purchaser should avail himself of the judgment of a more experienced person than himself. It is common to suppose that any kind of piano, however faulty, will do for learners; the truth being that where the instrument is imperfect the ear of the learner is liable to be deceived and abused; whilst the difficulties of practice are rendered more difficult still, and embarrass the novice instead of lending aid. The preservation of the piano demands that it should be placed in a position where it will not be subject to the action of either too great heat or cold, either of these acting prejudicially on the instrument. Pianos should be kept shut, to exclude dust and other particles, and should also be locked, to prevent their being injured by servants or children. Striking the keys with immoderate force is, as a matter of course, apt to break them, and besides, more noise is thereby produced than harmony. When a piano is to be left untouched for any length of time, it should be enveloped in a cloth or calico covering, to prevent it receiving injuries either external or internal. Pianos may be hired at so much per month, quarter, or year, either from the dealers or from music warehouses.

PICKLES, DIETETIC PROPERTIES OF.—Although pickles are very agreeable to the palate, and impart a relish to food, especially cold meats, they are very indigestible, and should be carefully shunned by dyspeptic subjects. The greater part of pickles purchased in shops is especially deleterious, as it is customary to mix copper with the preparation, in order to give the vegetables a bright green appearance; and this addition amounts to poison.

PICKLES MIXED.—Prepare a variety of vegetables, as cauliflower, cucumber, French beans, gherkins, &c., by cutting them in pieces and letting them lie in salt and water for two or three days; then make the pickle in the following manner:—Boil the quantity of vinegar required with peppercorns, mustard-seed, a small quantity of mace, a few cayenne pods, a little ginger, and half a pound of flour and mustard mixed smoothly in a basin, to be put in while boiling; place these altogether in a large stone jar.—See CABBAGE, CAULIFLOWER, CUCUMBER, GHERKINS, ONIONS, WALNUTS, &c.

PICOTEE.—This flower is of the same family as the carnation and the pink, and is to be cultivated in a similar manner. The annexed engraving is a diagram of a perfect picotee, and its character is as follows: The form, half a ball; the outline round; the petals imbricated, second row less than the

first, the third less than the second, and so on to the crown; the petals thick and smooth;



edges free from serrature or notch; colours dense and distinct, white, pure; every petal to maintain the character of the flower.—See CARNATION, PINK.

PICTURE.—See PAINTINGS.

PICTURE-FRAMES, TO GILD.—The surface to be gilt must be carefully covered with a strong size, made by boiling down pieces of white leather or clippings of parchment, till they are reduced to a strong jelly. When this coating has dried, eight or ten more must be applied; the size being mixed with a small quantity of whiting. The last coat is composed of size and massicot, or sometimes yellow ochre. Let it dry thoroughly, and then damp the surface a little at a time with a moist sponge, and apply the gold leaf before this dries. It will immediately adhere, and when dry, those parts which are brilliant, are to be furnished with an agate or dog's-tooth garnisher.

PIES.—See APPLE, BEEFSTEAK, CHICKEN, EEL, GIBLET, HARE, LAMB, LOBSTER, MUTTON, PARTRIDGE, PIGEON, PORK, POTATO, RABBIT, RHUBARB, VEAL, &c.

PIG ROAST.—The young of the animal, known as the sucking pig, is made choice of for this dish. The hair of the animal should be removed by scalding. When this is done, remove the entrails, thoroughly clean the nostrils and ears, and wash the whole body in cold water. Cut off the feet at the first joint, loosening the skin, and leaving it on to turn neatly over. The pig must then be stuffed as follows:—Take half an ounce of mild sage, and two young onions parboiled; chop these very fine, add a cupful of grated bread crumbs, a quarter of a pound of good

butter, and a high seasoning of cayenne pepper, and salt. Sew the slit neatly up, set it down to roast before a brisk clear fire, and baste first with brine, then with the fresh butter or salad oil; when the crackling is thoroughly browned and crisp, the pig will be sufficiently done. A pig iron, or some ingenious substitute, must be placed in the centre of the grate, part of the time, to prevent the middle regions of the animal from being scorched before the extremities are done. Serve with a sauce of clear beef or veal gravy, with a squeeze of lemon and, if approved, a little of the stuffing stirred in the same turc.

PIG ROASTED, TO CARVE.—Before serving up this dish, the cook usually divides the body, and garnishes the dish with the jaws and the ears. Cut the side of the pig in two from D to E; then place the fork in at B;



cut from C to A, and round underneath the foreleg to C again, thereby taking the shoulder off. To remove the hind leg, follow the same directions as for the foreleg; then carve the remainder of the pig, as pointed out for the first cut; serve gravy and stuffing with each portion. The ribs are generally considered the finest parts, but some prefer the neck end, between the shoulders.

PIG'S CHEEK.—To prepare pig's cheek for boiling, cut off the snout and clean the head. Divide it, take out the eyes and the brains, sprinkle the head with salt, and let it drain for twenty-four hours. Salt it with common salt and saltpetre; and simmer it till it is tender.

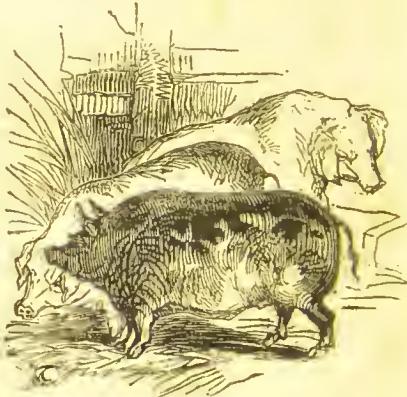
PIG'S FEET AND EARS.—Clean them carefully, soak them for some hours, and boil them till they are quite tender. Then take them out, and boil a little salt and vinegar with some of the liquor, and pour it over them when cold. When to be dressed, dry them, cut the feet in two, and slice the ears. Fry them and serve them with butter, mustard, and vinegar. They may be either fried in butter, or simply floured. *To fricassee them.* Cut the ears and flesh into neat pieces, and boil them in a little milk. Pour the liquor from them, and simmer in a little veal broth, with a bit of onion, mace, and lemon-peel. Before the dish is served up, add a little cream, butter, flour, and salt.

PIG'S FEET JELLY.—Clean the feet and ears very carefully, and soak them for some hours. Then boil them in a very small quantity of water till every bone can be taken out. Throw in half a handful of chopped sage, the same of parsley, and a seasoning of pepper, salt, and mace in fine powder. Simmer till the herbs are scalded, and then pour the whole into a mould, to remain till cold.

PIG'S HARSLET.—Wash and dry some liver, sweetbreads, and fat and lean pieces of pork, beating the latter with a rolling-pin, to make them tender. Season with pepper, salt, sage, and a little onion shred fine. When mixed, put all into a bladder, and sew it up securely with a needle and thread. Roast it on a hanging jack, or by a string. Serve with a sauce made of port wine and water, and just boiled up.

PIG'S HEAD COLLARED.—Scour the head and ears thoroughly, take off the hair, and remove the snout, the eyes, and the brain. Soak the head in water for one night, then drain it, salt it extremely well with common salt and saltpetre, and let it lie for five days. Boil it sufficiently to allow of the bones being taken out, then lay it on a dresser, turning the thick end of one side of the head towards the thin end of the other, to make the roll of equal size. Sprinkle it well with salt and white pepper, and roll it with the ears. The pig's feet may be also placed round the outside when boned, or the thin parts of two cow-heels if approved. Put the whole into a cloth, bind it with a broad tape, and boil it till quite tender. Place a heavy weight upon it, and do not remove the covering till the meat is cold.

PIGS, TO BREED AND REAR.—The breeds of pigs most esteemed in Great Britain are the Berkshire, Chinese, and Improved Essex. In purchasing pigs for fattening it is not always easy to procure the very best breeds; but some of the others may do very well. The sow should be at least ten months old before she is fit to



breed from: she goes with young a little more than four mouths, and has often two litters in a year, generally producing a numerous progeny, consisting of from eight to sixteen at a litter. The boar should be less in size than the sow, shorter and more compact in form, with a raised brawny neck, lively eye, small head, firm hard flesh, and his neck well furnished with bristles. Breeding within too close degrees of consanguinity, or as it is technically termed breeding in and in, is calculated to produce degeneracy in size, and also to impair the

fertility of the animal; it is therefore to be avoided. The proper seasons for producing litters are March and August; the young pig is exceedingly delicate, and the brood sow should not be allowed to farrow in winter. Another peril to the litter arises from the semi-carnivorous habits of the mother, which lead her to forget the dues of nature, and devour her own brood. She ought, therefore, to be well watched, and fed abundantly at such periods. The male, for the same reason, must be excluded altogether. Not unfrequently, moreover, the young are crushed to death by the mother, in consequence of their nestling unseen beneath the straw. To prevent this risk, a small quantity only of straw, dry and short, should be placed beneath them. If the object be to have sucking pigs for roasting, they should not be kept more than four or five weeks with the sow. If the young pigs are to be reared, it is of great importance to have them born at the two seasons of the year previously specified, in order that they may be weaned in temperate weather, and when there is an abundance of clover, vetches, mangold wurtzel, lettuce, &c. At six weeks old, the young ones of both sexes, not designed for breeding, should be incapacitated from propagating their kind; and at eight weeks they should be weaned with skim-milk and butter-milk. Young pigs thrive better, for a short time after weaning, on sweet than on sour milk; but when they are pretty well grown, acidulated milk seems more beneficial and palatable to them than sweet milk. Coarse pollard, or the refuse of corn, or some bruised or ground beans, should be given to them after weaning, with boiled or steamed potatoes, parsnips, or Swede turnips, with milk or kitchen wash. A pig may be fattened in about six weeks or two months. Young porkers are generally fattened between October and Christmas. A little salt sprinkled with their food will frequently make them relish it better. A great object ought to be, to feed pigs well from the commencement, the food then tells considerably; whereas, the cost and difficulty of bringing up lost condition, resulting from insufficient feeding, is very great. The piggery should be so situated as not to be offensive, and yet be easily supplied with food from the scullery and dairy. There should be a separate yard and sty for the weanlings; and for pigs in all stages of growth and condition, a clean, dry bed is indispensable. But if manure be a principal object, as it should be to the cottager more especially, the green food may be supplied to the pigs with most benefit in their confined yard, in order that their manure shall be incorporated with it. Litter abundantly supplied, will produce an amazing quantity of manure even from a single pig. The pig-sty may be built of any convenient material, stone or brick is the best. It should be dry and warm; and for this purpose, the floor is best paved with large stones, and should be raised a little above the ground, and slope a little towards a channel conducting the water into a drain leading to a

cesspool or manure tank. The roof may be thatched with straw, reeds, heath, or any warm material. The sty should be divided into at least two compartments, a sleeping place, and an open courtyard, one leading into the other. The sleeping place should be about seven feet square; the outer court should be about ten feet square. The open court of the pig-sty should, if possible, lie towards the sun, as the inmates are very fond of basking in the sunshine. The feeding utensils placed in the court should consist of two strong troughs, which cannot be easily upset. These troughs should be frequently washed and scoured; and if pigs are fed together, the troughs should be barred, so that each animal has a limited space through which it introduces its head, otherwise, the strongest will overpower, and perhaps drive away altogether from the food, the weaker of the party. The bars also prevent the animals from putting their dirty feet into the trough, which otherwise they will generally do. Young pigs require a great deal of liberty, which unquestionably promotes their growth and healthiness; but unless in the farm-yard, about the barn door, pigs in actual process of fattening should be confined altogether, so that they may eat and sleep alternately, without any of those disturbing influences which would tend to disturb digestion. In making choice of a pig, the following points should be attended to:—Sufficient depth of carcass, and breadth of loins and breast; bones, small; and joints fine. The legs should be no longer than, when fully fat, would just prevent the animal's body from trailing on the ground. The feet should be firm and sound; and the toes lie well together, and press straightly on the ground; the claws, also, should be even, upright and healthy. The head should not carry heavy bone, nor be too flat on the forehead; neither should the snout be too elongated. The ear should be, while pendulous, inclining somewhat forward, and at the same time light and thin. Scantiness of hair is a characteristic which renders the animal a hazardous speculation; for under these circumstances, the remarkable susceptibility to cold which pigs evince, will be aggravated, and the animal rendered liable to disease. The walk and movements of the pig must also be regarded. If these be dull and heavy, ill-health is to be suspected, probably some concealed disorder, either about to break forth or actually existing; there cannot be a more unfavourable symptom than a hung-down slouching head, carried as though it were too heavy for the animal's shoulders. The diseases to which the pig is liable are, fever, leprosy, tumours, murrain, measles, foul skin, mange, crackings of the skin, staggers, swelling of the spleen, indigestion or surfeit, lethargy, quinsy, inflammation of the lungs, catarrh, and diarrhoea. A large proportion of these, are the direct result of uncleanliness and injudicious feeding. In cases of fever and other sudden ailments, bleeding, purgatives, and a spare diet are the most effectual means of cure. Bleeding may be performed by opening the veins

behind the ears, or by cutting off a portion of the ears and tail. Castor or linseed oil, Epsom salts, jalap, and flour of sulphur, are simple purgatives, and can be readily administered in a small mess of enticing food; and when given, should always be followed by a spare and liquid diet. For skin diseases, frequent scrubbings with soap and water, and unguents of tar and sulphur will be found most effectual. In the case of measles, one of the most common diseases to which pigs are liable—the following recipe is recommended:—Suffer the animal to fast, in the first instance, for twenty-four hours, and then administer a warm drink, containing a drachm of carbonate of soda, and an ounce of bole armenian; wash the animal, cleanse the sty, and change the bedding; give at every feeding, say thrice a day, thirty grains of flour of sulphur and ten of nitre. A frequent washing of the skin, though not usual, by removing the scurf and other defilements with which it is incrusted, will greatly tend to promote the health of the animal; and to aid cleanliness in this respect, every piggery should be provided with a rubbing-post, by means of which the animal may free himself of many impurities.

PIGEON BROILED.—Split the bird down the back, spread it open, season with pepper and salt, and broil over a quick clear fire. Serve with mushroom sauce.

PIGEON FRICASSEE.—Cut half a pound of pickled pork into thin slices, and put it in a small quantity of water on the fire for about half an hour; scald two or three large pigeons in boiling water, and cut them in halves; add the pork, with a bundle of parsley, thyme, shalots, and two cloves; soak them for a little while, then add water and whole pepper. When done, skim and sift the sauce, add to it three yolks of eggs and a little cream, and incorporate the whole over the fire, but do not let it boil. When done, add a small quantity of vinegar.

PIGEON PIE.—Rub the pigeons with pepper and salt inside and out; put in a bit of butter, and, if approved, some parsley chopped with the livers, and a little of the same seasoning. Lay a beefsteak at the bottom of a dish, and the birds on it; between every two a hard egg. Put a cupful of water in the dish; and if a thin slice or two of ham be added, it will greatly improve the flavour. When ham is cut for gravy or pies, the under part should be taken rather than the prime. Season the gizzards and two joints of the wings, and place them in the centre of the pie. Over them, in a hole made in the crust, insert the feet nicely cleaned, and leave them protruding, to indicate the contents of the pie.

PIGEON RAGOUT.—Make forcemeat sufficient to stuff four birds, chopping up the livers with the other ingredients. Brown the pigeons in the frying-pan, and then put them into a stewpan, with enough rich beef gravy to cover them; thicken this with flour, and pour in a teacupful of mushroom ketchup and a gill of port wine. If fresh mushrooms can be procured, add four or five to the stew: in this case omit the ketchup.

PIGEON ROAST.—Pick, clean, singe, and wash the bird well; truss it with the feet on, and put into them some pepper and salt. While roasting, baste them with butter. Just previous to serving, dredge them with flour, and froth them with butter. Roast them for half an hour. Serve them with parsley and butter in the dish, or make a gravy of the giblets, and add some minced parsley with a seasoning of pepper and salt. Thicken with a little flour and butter; pour it with the giblets into the dish, and then put in the pigeons.

PIGEON SOUP.—Make a clear gravy stock of four pounds of lean beef, or scrap and shanks of mutton, two small turnips, a head of celery, two onions, and a gallon of water boiled down to three quarts. Put to this the gizzards, crops, and livers of four or five pigeons. Truss the birds as for boiling, and season them with pepper and salt. Dredge them with flour, and brown them in a frying-pan. Thicken the stock with butter kneaded in browned flour; strain it, and season it with white pepper, salt, and a little mace, and let the pigeons stew in it for half an hour, taking off the scum as it rises. Throw a few toasted sippets into the turcun before dishing the soup.

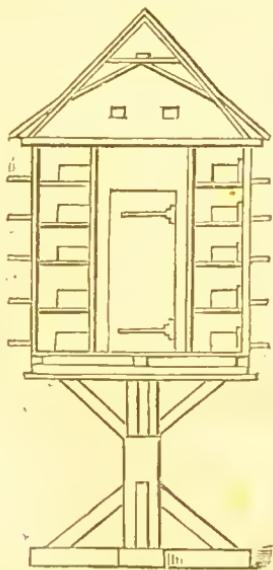
PIGEONS STEWED.—Wash and clean six pigeons, cut them into quarters, and put all their giblets with them into a stewpan, with a piece of butter, a bit of lemon-peel, two blades of mace, some chopped parsley, salt, and pepper. Cover the pan closely, and stew the contents till they are tender; thicken the same with the yolk of an egg beaten up with three tablespoonfuls of cream and a bit of butter dusted with flour; let them stew ten minutes longer before serving.

PIGEONS, TO CARVE.—Pigeons may be simply cut in two, either from one end to the other of the bird, or across.

PIGEONS, TO REAR AND BREED.—Pigeons are among the most useful and ornamental attractions of a rural dwelling; and in every case they afford great interest and amusement in a state of domestication. In purchasing pigeons, the following particulars should be borne in mind. The eyes of the younger pigeons are smaller, fainter, and less prominent than those of the old ones. The neck of the old birds is lengthened, strong, and hard: on the contrary, with the young ones, it is weaker and softer, while its extremity is sharper and less worn by the gathering of its food. An old pigeon has darker, harder, and stronger feet, with longer spurs than the younger ones, whose feet are soft, red, and tender. The brightness and brilliancy of the feathers of the neck affords also a criterion of the age of the pigeon. On the young pigeon, the brightness of the colour is scarcely perceptible from that of the plumage of its body, but as the bird advances in age, the feathers become as it were more matted, and a beautiful diversity of colour is exhibited, which adds greatly to the beauty of the bird. Particular attention should be paid to the number of feathers in the wings and tail. Every wing has at the end three long

feathers, called the flight feathers; then six immediately following, and gradually diminishing in length, then eight smaller feathers, which gradually increase in length, three of which are more prominent than the others, the centre one being particularly so. The tail consists of twelve feathers, six on the right, six on the left. A faultail pigeon ought to have thirty-six feathers in its tail; and no pigeon possessing a less number is considered a well-bred or a valuable bird. There are several varieties of the pigeon, but the most remarkable is the carrier; it is a large species of bird, and is trained to carry written communications and other missives to certain destinations. When the services of the bird are about to be put into requisition, it must be taken from the place to which it is destined to return, and be temporarily domiciled at the place from which the intelligence is to be conveyed. It is taken to that place hoodwinked, or in a covered basket. When the moment for employing the bird has arrived, the individual requiring its services writes a small billet upon thin paper, which is placed lengthwise under the wing, and fastened by a pin to one of the feathers, taking care that the pin does not incommod the bird, and also preventing the possibility of the paper being filled with air. On being released, the carrier ascends to a great height, takes one or two turns in the air, and then commences its onward flight. Pigeons are granivorous,

places of confinement of these birds, which they swallow to assist the digestion of their food. A supply of common salt is also necessary, to correct acidity. The pigeons should be provided with fresh water daily contained in earthenware fountain bottles, and placed within their reach. The food should be put into shallow boxes, and covered with a wire netting, so that the birds may eat without scattering and wasting their food, which they are apt to do if some such precaution be not taken. Many persons keep their pigeons between the garret and the roof of the dwelling-houses, with holes at which they go out and in; and this lodging, in lieu of a more suitable one, answers very well. But the more regular plan is to furnish the birds with a properly constructed house. The interior of this must be lined with nests or holes, subdivided either by stone, by boards, or each nest composed of a vase or vessel of earthenware placed on its side. Each cell should be twelve inches deep front to back, and sixteen inches broad; the entrance hole should not be opposite the centre of the cell, but on one side, so that the pigeons may build their nests a little out of sight. In front of each cell there should be a slip of wood to rest and coo upon; but as different pairs are incessantly quarrelling about the right of walking on these slips, and are apt to fight for the possession of certain cells, it is best to separate the slips by upright partitions. The house should be elevated on a wall facing the south-east, and otherwise placed at such a height as to be out of the reach of vermin and cats. The house should be painted white, as the pigeon is attracted by that colour. The common pigeon begins to breed at the age of nine months, and continues breeding every month. The female lays two eggs, and the young produced are ordinarily male and female. With common care one pair of pigeons will yield the breeder nine or ten pairs in the course of the year, and will continue doing this for four years. The diseases of pigeons are very often the result of careless management, exposure to cold and damp, and an improper supply of food. A variation of diet will frequently effect a beneficial change in the bird, and is always accessory to health. Cleanliness cannot be too much insisted on. The houses, boxes, or shelves should be thoroughly cleansed at least once a year, scraping and washing them well with strong yellow soap and warm water, and taking particular care that every part is dry before the occupants resume their dwellings. It is also indispensable to burn the nests after every brood, and to provide fresh nests occasionally for the old birds. If the birds be attacked with vermin, their feathers must be fumigated with tobacco smoke, repeating the process till the enemy are dislodged. When young pigeons are attacked by what are called the blacks or pigeon bugs, the dust of tobacco may be sprinkled over the young birds, and in the nest. The wet roop is the name given to a sort of congh which sometimes annoys the pigeon. The best remedy consists of three or four peppercorns,



and will eat with relish wheat, barley, oats, canary and hemp seed, peas, beans, vetches, and tares. Small tick beans, sometimes called pigeon beans, are also a favourite food; the smallest beans only should be purchased. Hemp seed should be used sparingly, as it is a stimulating food. Fine fresh gravel should be strewed about the

given once in three days; a few sprigs of green rue, steeped in the water, will be an aid to the cure. The dry roop is a dry husky cough, which the birds often suffer from while moulting. Three or four cloves of garlic once a day will generally effect a cure. The canker is a disease arising from the birds pecking each other. The sore parts must be rubbed with a mixture of burnt alum and honey every day; or if this has no effect, add to it five grains of Roman vitriol dissolved in half a spoonful of white wine vinegar, and anoint as before. The fungous-like flesh round the eyes of the carrier and other pigeons, when torn, should be bathed with a solution of alum in water. If pigeons do not moult freely, it is a sure sign of bad health. They should in such cases be removed to a warm place, and have the tail feathers plucked out: hemp seed should also be given with their food, and a little clary or saffron mixed with their water.

PIKE.—“Fell tyrant of the watery plains” changes its name from Jack on attaining the weight of three or four pounds. It is of an olive colour, with yellow spots on the upper part of the body, and white, with olive spots, or waves, or stripes, on the lower. Its mouth is profusely armed with sharp teeth, the very palate, tongue, and roof being covered by them. The pike is most frequently found in deeps and eddies, by the side of streams, and in rivers, lakes, meres, broads, locks, and ponds. It is fond of beds of reeds, rushes, flags, water-lilies, and other aquatic plants; shelving banks and roots of trees. The pike is best in season from October to March, which is likewise the proper period to fish for it. It spawns in March or April; but this operation of nature varies, according to the backwardness or forwardness of the season, and the temperature of the water. For this purpose it selects creeks or ditches communicating with rivers, or the quiet parts of still waters, depositing its spawn on such aquatic plants as the water it inhabits may happen to produce. Pike are caught by spinning or trolling, or with alive bait. The baits used are roach, dace, chub, gudgeon, bleak, loach, minnows, perch (with the back fin removed), rats, mice, water-fowl, frogs, &c. They will also in some parts take an artificial fly made to represent the dragon-fly. Strange tales are told of the voracity of the pike—a watch and appurtenances having been found in the gullet of one; another having seized the nose of a mule whilst drinking; another becoming suffocated by seizing and swallowing the head and neck of a swan. But a few years since a monster pike seized and dreadfully mutilated the arm of a boy playing at the edge of one of the ponds in Richmond Park.—Books: *Salter*; *Ephemera*; *Blaine*; *Hawker*.

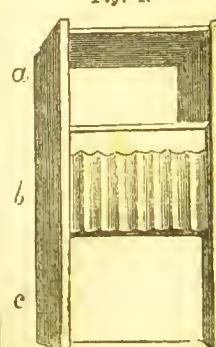
PIKE, TO DRESS.—Have scaled and cleaned the fish without cutting open much of the breast, stuff them with a forcemeat made thus:—Beat yolks of eggs, a few oysters bearded and chopped, two boned anchovies, grated bread, minced parsley and a portion of shallot, a blade of mace pounded, pepper, allspice, and salt. Mix them in proper proportion, and having

melted a good piece of butter in a stewpan, stir the whole of the ingredients in it over the fire, till of the consistence of a thick batter, adding some biscuit powder or flour if necessary. Fill the fish and sew up the slit. Bake them in a moderate oven, basting with plenty of butter, and sticking batter all over them. Serve with anchovy sauce.

PILAU.—A savoury dish, made as follows:—Stew some rice in stock, or with butter, and season it with white pepper, cayenne, mace, and cloves. Place two small boiled fowls, or a few dressed veal or mutton cutlets, in the centre of a large dish, in which a layer of rice is laid, and arrange some slices of broiled bacon around them. Cover with boiled rice, smooth and glaze the rice with egg, and set the dish before the fire or in the oven to brown. Garnish with divided yolks of hard-boiled eggs and fried onions, or use forcemeat balls.

PILL.—A well-known form of medicine. The facility with which pills are made and administered, their comparatively little taste, their power of preserving their properties for a considerable length of time, and, lastly, their portability and inexpensiveness, have long rendered them the most frequently employed and the most popular form of medicine. The preparation of pills is not a process of much difficulty. The medicinals employed must be made into a consistent and moderately firm mass, sufficiently plastic to be rolled or moulded into any shape, without adhering to the fingers, knife, or slab, and yet sufficiently solid to retain the globular form when divided into pills. As a general rule, all the constituents of a pill which can be pulverized should be reduced to fine powder, before mixing them with the soft ingredients which enter into its composition; and these last, should next be gradually added, and the mixture triturated and beaten until the whole is a perfectly incorporated mass. It is then ready to be divided into pills. This is effected by rolling it on a slab, with a pill or bolus knife, into small pipes or cylinders, then dividing them into pieces of the requisite weight; and lastly, rolling them between the thumb and finger to give them a globular form. A little powdered liquorice-root or

Fig. 1.



starch is commonly employed, to prevent the pills adhering to the fingers or to each other after they are made. A still more convenient mode of forming pills is by the aid of a single instrument called the “pill machine,” as seen in the engraving. Fig. 1 is divided into three compartments:—c is a vacant space to receive the divided mass, which is to be rolled into pills;

in dividing the mass into pills; *a* is a box containing the powder for covering the pills, and to receive them as they are formed. *Fig. 2* consists of a brass plate *a*, grooved to match the plate *b* in *Fig. 1*, and bounded at both ends by moveable projecting plates *b b*, containing each two wheels under the ledge of the plate *b*, and a wooden bracket *c*, with two handles *d d*, to which this plate is affixed. In using this machine the pill mass is rolled into a cylindrical form on the front part of it, by means of *fig. 2* inverted; the small roll is then laid on the cutting part of the instrument *fig. 1 b*, and divided by passing *fig. 2* over it; the little wheels enabling the latter to run easily on the brass plate which forms the margin of the bed of the machine. The pills thus formed are then drawn forward on to the smooth bed

on which the mass was first rolled, and receive a finishing turn or two with the smooth side of the cutter, by which they are rendered more nearly spherical. They are lastly thrown over into *fig. 1 c*, ready to be transferred to the pill-box. As pill-masses are liable to get hard and brittle by keeping, an excellent plan is to keep the dry ingredients powdered and mixed together in well-corked bottles or jars, when a portion may at any time be beaten up with syrup, conserve, soap, &c., according to the formula, and as wanted for use.

The subjoined prescriptions give three of the most useful recipes in which this form of administering medicine can be employed.

1. Antibilious Pill.—Take of

Compound colocynth pill	2 scruples
Calomel	1 scruple

Mix, and divide into twelve pills. Two may be taken for a dose, or one night and morning. In constitutions where calomel is inadmissible, the same amount of blue pill can be substituted for the more active calomel. 2. Tonic pill.—Take of

Quinine	12 grains
Rhubarb	10 grains
Ginger	10 grains
Extract of gentian, enough to make into a mass.	

Mix, and divide into twelve pills. One to be taken once, twice, or three times a day; according to the state of the patient. 3. Dinner or digestive pill.—Take of

Barbadoes aloes, and gum mastic, of each . . .	12 grains
Extract of camomile . . .	½ drachm,

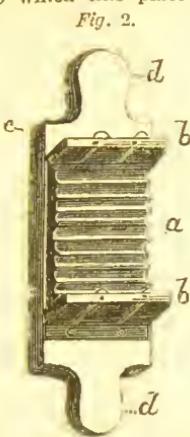


Fig. 2.

or enough to make a mass, which divide into twelve pills, one to be taken an hour before dinner, or each meal if necessary. For those who with weak appetite are troubled with flatulence or heartburn, the following formula will be found most efficacious as a stomachic and dinner pill. Take of

Ginger	6 grains
Dried carbonate of soda . . .	30 gruius
Rhubarb and colombo, of each	6 grains
Extract of gentian, enough to make a mass	

Divide into twelve pills; one of which may be taken half an hour, or longer, before every meal.

PILLOW.—That portion of the bedding upon which the head repose. For the purposes of health the pillow should be placed neither too high nor too low; the former position deprives the upper part of the body of its necessary circulation, and the latter allows too great a flow of blood to the head, which is in all cases injurious, but especially hazardous with persons of an apoplectic tendency.

PIMPLES.—See FACE, AFFECTIONS OF. PIN.—A well-known instrument of domestic and personal utility. All persons, and especially females, should always carry a few pins about them to enable them to repair temporarily any damage done to their clothing. The practice of using pins in dressing children is to be condemned, as it frequently happens that one of these will prick a child and cause him much pain for hours, while he is not able to express the cause of it. Placing pins in the mouth is also a most dangerous custom, and for this absurd trick, by which a few minutes are perhaps saved, many persons have paid the forfeit of years of pain and ultimately death. In buying pins the very cheap kinds should be avoided, as they are generally imperfectly made and have no points, so that when they are called into use the loss of time and temper they occasion is of far more consequence than the difference of price between them and a higher priced pin.

PINCERS.—An instrument employed for drawing nails, &c. In gardening, a pair of pincers are used for pulling weeds, thistles, and other plants on hedges; they are formed of wood pointed with plate iron. They are also sometimes used for common weeding, to prevent stooping and treading on the beds and borders, but their chief use is to weed ponds, either reaching from the shores or from boats.

PINCUSHION.—A receptacle for pins, which may be made of any dimensions, and of a variety of materials; a handy little article of this kind is made of thick card-board covered with silk, and being perfectly flat and of small dimensions may be carried about the person without inconvenience.

PIN MONEY.—A term applied to gifts of money by a husband to his wife for the purchase of apparel, ornaments for her person, or for her private expenditure. Such gifts may be made during marriage,

or, what is more usual, a sum of money for the purposes enumerated may be secured by the husband to his wife by settlement, or by articles executed before the marriage. Pin-money thus secured is not liable to the husband's debts; the wife is entitled in all cases to such money, and to her savings out of it and things bought with it. Several questions have arisen upon pin-money after the husband's death when arrears have been claimed by the wife; and it is the general rule that she can only claim arrears of one year's pin-money if she has been supported by the husband with necessaries during the time that such arrears have accumulated. If it is expressed in the deed of settlement that the pin-money is given for a particular purpose, as for the wife's apparel, and it is proved that the husband provided apparel for the wife, she has no claim after his death to any arrears of pin-money. If the husband leave a legacy to the wife equal to the arrears of pin-money or more, such legacy, according to the general rule as to the satisfaction of debts by the giving of legacies, will be considered as a payment of the arrears due at the time when the will was made. If a wife elope and live apart from her husband, she does not thereby forfeit her right to her pin-money, and she may recover it.—See ALIMONY, HUSBAND AND WIFE.

PINE APPLE.—The propagation of this fruit is occasionally by seed, which should be sown one or two inches apart, or one in each 60-sized pot, at the depth of about a quarter of an inch. After germination has taken place they ought to be fully exposed to the light, and their leaves protected. By the end of August the plants will have attained a fit state for transplanting, after which they should be heated like other young pine plants. In the third year they may be expected to produce fruit. The other modes of propagation are by gills (small secondary suckers produced at the base of the fruit), crowns which surmount every perfect fruit, suckers which arise from towards the middle of the stem of the plant. They are treated exactly as common suckers. One of the last methods of culture is to pot the young plants in a mixture of one-third loam, and two-thirds of half decayed leaves, in which they root very freely; they may then be plunged in frames on a stove, but not in too much bottom heat, as that will injure their roots. The pine-apple thrives best by keeping the house very warm and moist, and by giving air early in the morning, and shutting it up early in the afternoon. As soon as shut up give a gentle sprinkling of water all over the plants. When the plants increase in size and larger pots are required, add more loam to the soil in which they are potted, and keep the pots well drained with small potsherds in the bottom. In shifting them into larger pots care must be taken not to injure their roots. When they are put into the fruiting house, first turn the tan-bed all over to the bottom, adding a sufficient quantity of fresh tan, so as to give a strong heat; then set the plants upon the tan, but do not plunge them till

the heat begins to decline. Where plenty of leaves can be had they need not be plunged at all, but as soon as the heat declines, fill up between the pots with them. Oak or chestnut leaves are the best; these cause the heat to arise as strongly as is required. When the heat again declines, add another quantity of leaves, and so on till the plants are half-buried, and water them frequently, but little at a time, and they will root in these leaves, and swell off their fruit to a great size; the suckers root also into the leaves, and grow to large plants before they are taken off; so that these plants produce their fruits, when potted off, much earlier than by any other means.

PINE TREE.—Of this tree there are upwards of fifty species. They are all deserving of culture, being very ornamental and beautiful in every stage of their growth. They will succeed on almost any kind of soil, but to bring the timber to its greatest state of perfection, a somewhat loamy surface soil and a cool subsoil are requisite. Young plants may be obtained by a variety of methods. All the species may be propagated by layers, by inarching on nearly allied kinds, and by herbaceous grafting; many may also be increased by cuttings, but the speediest way is by seed. The seed should be sown on a finely-prepared rather sandy soil, in March or April. The seeds of the most common kinds are always sown on beds, and after being gently beaten down are covered with light soil. Their after-culture demands very little trouble or care, and depends upon the methods usually adopted with other trees.

PINE APPLE COMPOTE.—Peel a pine apple rather thickly, to leave no black spots upon it, make a syrup with half a pound of sugar, cut the pine apple into round slices a quarter of an inch in thickness, put them into the syrup, and boil them for ten minutes; remove them with a cullender spoon, reduce the syrup until it attains a somewhat thick consistence, and pour it over the pine apple; when cold it is ready to serve.

PINE APPLE CREAM.—Infuse slices of pine apple, or the rind only, in boiling cream, and proceed as is usual for other fruit creams.

PINE APPLE ICE.—Take eight ounces of preserved pine apple, four slices cut into small dice, a quart of cream, and the juice of three lemons. Pound or grate the pine apple, pass it through a sieve, mix, and freeze.

 Pine apple preserved, 8ozs.; pine apple fruit, 4 slices; cream, 1 quart; lemons, juice of 3.

PINE APPLE MARMALADE.—Take the largest, ripest, and most perfect pine apples imported; pare them, and cut out whatever blemishes are to be found. Weigh each pine apple, balancing the other scale with an equal weight of the best double-refined sugar, broken into large lumps. Grate the pine apples on a large dish, omitting the hard core which each fruit contains. Put the grated pine apple and sugar into a preserving pan, mixing them

thoroughly. Set it over a moderate and very clear fire, and boil and skim it well, stirring it after skimming. After the scum has ceased to appear, stir the marmalade frequently till it is done, which will generally be in an hour or an hour and a half from the time of boiling. But if it be not smooth, clear, and bright, in that time, continue boiling until it becomes so. Put it warm into tumblers or broad mouthed glass jars. Lay inside the top of each doubled white tissue-paper, cut exactly to fit, and press it down lightly with the finger round the edge so as to cover smoothly the surface of the marmalade; tie them down and set them in a cool dry place.

PINE APPLE SYRUP.—Boil in clarified syrup an equal quantity of fruit, cut into small squares. When sufficiently done, pour off the syrup from the fruit, transfer it to bottles, and set it by for use.

PINK.—This plant closely resembles the carnation and picotee, with the following exceptions. The lacing as it were of a pink is rough outside and inside, with a portion of white outside the lacing, as if a band of colour had been laid on; besides this, there is colour at the base of every petal, and about one-third of the distance along the petal, so that it forms an eye or centre of colour, which is peculiar to itself. The pink may be propagated and cultivated in every respect similar to the carnation. Pipings of it are best made at the end of May or early in June. By the middle of August pinks are all gone out of flower. The old plants are not of much use where choice flowers are desired, as they seldom produce the second year first-rate bloom, but for ornamenting borders they are valuable. Remove them out of the bed, trim off all dead flower-stems; and plant them in the borders of the garden rather deeper than they have been before. They will make fresh roots higher up the stems, and form close, compact bushes, producing the next season abundance of flowers. If it be intended to grow pinks again in the same bed, the soil ought to be taken out a foot deep, and renewed with fresh loam, and very rotten stable litter, in the proportion of three of the first to one of the latter, turning it over frequently to mix it thoroughly and sweeten it. This should be done by the third week in August. Raise the bed six inches above the soil around, and formed like a pitched roof. The compost should be at least a foot deep. Plant in rows the first week in September, and twelve inches apart each way. Shelter in winter, stir the soil frequently in the spring, and mulch with short well-decayed stubble early in June.

PINK SAUCER.—This is employed for imparting an artificial bloom to the cheeks, and may be prepared as follows:—Take eight ounces of dried safflower, previously washed in water, until it no longer gives out any colour, two ounces of subcarbonate of soda, and two gallons of water. Infuse, and afterwards strain it, add four pounds of French chalk, scraped fine with Dutch rushes, and precipitate the colour upon it, with citric or tartaric acid.

PIPE, SMOKING.—The advisability of smoking tobacco in any form has long been a vexed question. If, however, the practice be permitted, the smoking tobacco through a pipe is held to be less injurious than indulging in cigars. The quantity which may be ventured on without injury, has been limited by an eminent authority to two pipes per night. In smoking tobacco pipes, persons should be cautious not to use pipes which have already been smoked from by others, and when a new pipe is employed, the extremity of the stem should be slightly coated with sealing wax to prevent the new clay from causing injury to the mouth, which it otherwise would.

PIPE, WATER.—The pipes from which the supply of water is served do not very frequently get out of repair, they are, however, liable to become frozen in the winter, thereby stopping the supply, and occasioning great inconvenience and expense; one of the best methods to prevent the water freezing in the pipes is always to allow the water to drip from the tap, which causes a constant action in the body of water. When pipes are frozen, the best way to thaw them is to lay over them a quantity of litter from the stable or the dung-heap.

PIPES, FOR DRAINING.—These are best made of brick clay, and coated with glaze; the kind of pipes specially adapted for house draining are those of which the joints can be disposed with the nicest accuracy. The cost is slightly more expensive than ordinary piping, but the advantages secured more than counterbalance the increased outlay.

PIPKIN.—A domestic utensil used for boiling, simmering, infusing, &c. They are usually made of earthenware and glazed on the inside. For many processes the pipkin is preferable to the ordinary saucepan, the contents do not so easily burn, and the vessel admits of being cleaned more thoroughly.

PIQUET.—A game of cards played by two persons, with only thirty-two cards; all the deuces, threes, fours, fives, and sixes being set aside. In playing at this game, twelve cards are dealt to each player, and the rest laid on the table: when, if one of the players find he has not a court card in his hand, he has to declare that he has a *carte blanche*, and to tell how many cards he will lay out, and desire the other to discard, that he may show his game and satisfy his antagonist that the *carte blanche* is real; for which he reckons ten. In doing this, the eldest hand may take in three, four, or five, discarding as many of his own for them, after which the other may take in all the remainder if he please. After discarding, the eldest hand examines what suit he has most cards of; and, reckoning how many points he has in that suit, if the other has not so many in that or any other suit, he reckons one for every ten in that suit; he who thus reckons most is said to win the point. In thus reckoning the cards, every card counts for the number it bears, as ten for ten; each court card counts as ten, and the ace as eleven; the game is usually one hundred. The point being over, each

examines what sequences he has of the same suit. These several sequences are distinguished in dignity by the cards they commence from: thus, ace, knig, and queen are styled tierce major; king, queen, and knave, tierce to a king; knave, ten, and nine, tierce to a knave; and the last tierce, quatre, or quinte prevails, so as to make all the others in that hand good, and to destroy all those in the other hand. The sequences arranged, the antagonists proceed to examine how many aces, kings, queens, knaves, and tens each holds; reckoning for every three of any sort, three; but he that with the same number of threes or fours has one that is higher than any the other has, makes his own good, and sets aside all his adversary's; excepting four of any sort, which is called a quatorze, which counts as fourteen. The game in hand being thus reckoned, the eldest proceeds to play, reckoning one for every card he plays above nine, while the other follows him in the suit; but unless a card be won by one above nine, except it be the last trick, nothing is reckoned for it. The cards being played out, he that has most tricks reckons ten for winning the cards; but if they have tricks alike, neither reckons anything. If one of them win all the tricks, instead of counting ten, which is his right for winning the cards, he reckons forty, and this is called capot. The deal being finished, each player sets up his game; they then proceed to deal as before, cutting afresh each time for the deal; if both parties are within a few points of being up, the carte blanche is the first that reckons, then the point, then the sequences, then the quatorzes, then the tierces, and then the tenth cards. He that can reckon thirty in hand by carte blanche, points, quintes, &c., without playing before the other has reckoned anything, reckons ninety for them, and this is called a repique; and if he reckons above thirty, he reckons so many above ninety. If he can make up thirty, part in hand and part in play, before the other has counted anything, he reckons for them sixty; and this is called a pique. The following are the general rules for playing the game:—1. Play by the stages of your game; that is, when you are backward in the game, or behind your adversary, play a pushing game, otherwise you ought to make twenty-seven points elder-hand, and thirteen points younger hand; and you should in every hand compare your game with your adversary's, and discard accordingly. 2. Discard in expectation of winning the cards; do not discard for a low quatorze, such as four queens, four knaves, or four tens, because in any of these cases the odds are three to one elder-hand, and seventeen to three younger-hand, that you do not succeed. 3. At the beginning of a party, play to make your game; if you have in your hand a tierce major, and the seven of any suit, together with tierce to a king, a queen, or a knave, discard one of them in preference to the seven. 4. If your adversary be considerably before you in the game, the consideration of winning the cards must be quite out of the question, you must

therefore make a push for the game. 5. Gaining the point generally makes ten points difference; therefore, when you discard, endeavour to gain it, but do not risk losing the cards by so doing. 6. If you have six tricks with any winning card in your hand, never fail playing that card, unless in the course of the play you discover what cards your adversary has laid out; or unless by gaining the additional point you save the lurch or win the game. 7. If you are greatly advanced in the game, it is to your interest to let your adversary gain two points for your one as often as you can, especially if in the next deal you are to be elder-hand; but if, on the contrary, you are to be younger-hand, do not regard the losing two or three points for the gaining of one, because that point brings you within your show. 8. The younger-hand is to play upon the defensive; therefore, in order to make his thirteen points, he is to carry tierces, quatres, and especially strive for the point. 9. The elder or younger-hand should sometimes sink one of his points or a tierce, in hopes of winning the cards; but this must be done with judgment and caution. 10. The younger-hand having the cards equally dealt him, is not to take in any cards, if thereby he runs a risk of losing them, unless he is very backward in the game, and has then a scheme for a great game. 11. If the younger-hand has the probability of saving or winning the cards by a deep discard, as for example: suppose he should have the king, queen, and nine of a suit; or the king, knave, and nine of a suit; in this case he may discard either of those suits, with a moral certainty of not being attacked in them. 12. The younger-hand having three aces dealt him, it is generally his best play to throw out the fourth suit. 13. The younger-hand has generally to carry guards to his queen-suits, in order to make points and save the cards. 14. When the younger-hand observes that the elder-hand, by calling his point, has five cards which will make five tricks in play, and may have the ace and queen of another suit, he should throw away the guard to the king of the latter suit, especially if he have put out one from it, which will give him an even chance of saving the cards. 15. If the elder-hand is sure to make the cards equal, by playing them in any particular manner, and is advanced before his adversary in the game, he should not risk losing them, but if his adversary is greatly before him, it is better to risk losing the cards in expectation of winning them.

PLAICE.—A flat fish extremely abundant on our coasts. It is inferior to the sole, the flesh being less firm and not so white or well-flavoured. Like all ground fish they are very tenacious of life, and therefore, keep well.

PLAICE, TO DRESS.—Plaice may be either boiled or fried in the ordinary way; the following is also an excellent method of dressing it: sprinkle the fish with salt, and keep it for twenty-four hours. Then wash it and wipe it dry, smear it over with egg, and cover it with crumbs of bread. Boil

some lard or dripping with two table-spoonfuls of vinegar; lay in the fish and fry of a fine brown colour. Drain off the fat, serve the fish with fried parsley laid round, and anchovy sauce.

PLANTING. — See FLOWER GARDEN, KITCHEN GARDEN, ORCHARD; also APPLE, ASH, CEDAR, CHERRY, LIME, OAK, PEAR, PINE, PLUM, &c.

PLANTS, TO DRY AND PRESERVE. — As pressure is necessary for drying plants, the first thing requisite is to construct a press, which in this instance is made of two of the thickest milled boards, each twenty inches in length, and fourteen in width; also two leather straps with buckles, and boles at intervals to allow for the varying bulk of the press; then procure two quires of coarse sugar paper, which can be procured at a grocer's. After having selected the most perfect specimens of flowers, with their stems, lower leaves, and roots when practicable, and having carefully observed that the plants be free from dew or moisture, lay every portion out delicately on one of the coarse sheets, being careful at the same time that one part of the specimen does not interfere with another; the leaf should be filled. Allow several sheets to intervene before another sheet is filled with specimens. If the flowers be delicate, their colours will be better preserved by placing blotting paper between the folds, to absorb moisture. The plants are now ready to be put into the press, the straps forming the pressure, which, however, must not be great at first. It is necessary to remove the plants every day, and dry the papers at the fire. When the specimens are quite dry, they should be taken from the press, and each plant separately sewed or fastened with gum on to half-sheets of foolscap. The sheets arranged according to their several orders should be kept in trays, boxes, or in a cabinet constructed for the purpose, in a dry room where they will be ready for future reference. In every case the plants ought to be thoroughly dried before they are finally assorted, if not they will soon become mouldy, lose their hues, and become a mere mass of useless refuse.

PLASTER OF PARIS, TO TAKE IMPRESSIONS FROM. — The plaster must be pulverized and sifted through very fine gauze. First rub over the medal, or engraved stone, very softly with oil, and having wiped it with cotton, surround the edge of it with a slip of thin lead. Mix the sifted plaster with water, and stir it gently to prevent it disengaging air-bubbles; then pour it over the object of which the impression is wanted, and suffer it to harden and dry. It is easily detached, and forms a mould strongly marked.

PLASTERS. — Compounds of adhesive tenacious substances. Plasters should not adhere to the hand when cold; they should be easily spread when heated, and should remain tenacious and pliant after they are spread, but should not be so soft as to run when heated by the skin. Plasters are very serviceable for delicately organized persons, or for those who are much exposed to the

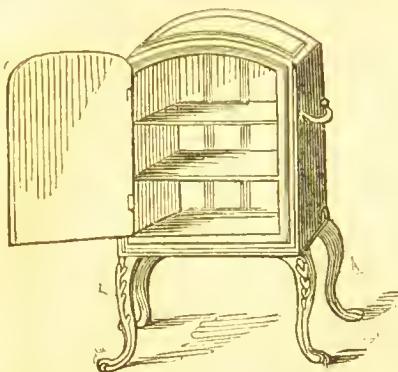
variations of temperature; when employed for the chest one should be placed on at the commencement of winter, and suffered to remain on until it peels off, when it should be clipped away by degrees, and when entirely removed, replaced by another. Plasters are usually composed of unctuous substances united to metallic oxides, or to powders, wax, or resin. They are usually formed whilst warm into half-pound rolls, about eight or nine inches long, and wrapped in paper. When required for use, a little is melted off the roll by means of a heated iron spatula, and spread upon leather, linen, or silk. In using the spatula the flat surface



is applied to the end of the roll, the melted substance being allowed to drop on the material on which it is to be spread. When a sufficient quantity has been melted, it is then to be spread evenly and thinly by means of the edge of the instrument. When spread plasters are warmed for application, the unspread side should always be held to the heat. When plasters are to be removed from the skin, they should always be warmed through with warm water. Plasters are preserved by enveloping the rolls with paper, to exclude the air as much as possible, and by keeping them in a cool situation. When kept for any length of time, they are apt to become hard and brittle, and to lose their colour. When this is the case, they should be re-melted by a gentle heat, and sufficient oil added to the mass to restore it to a proper consistence.

PLATE, TO CLEAN. — Articles of plate after being used should be washed in hot water, or if stained they should be boiled, and afterwards rinsed and dried before the process of cleaning is commenced. They should be very carefully handled, or they will receive deep scratches difficult to remove. The best plate-powder consists of dried and finely-sifted whiting or chalk. The greater part of the white sold in the shops is too coarse for the purpose, only the finest, therefore, should be employed. Brushes, hard and soft, sponge, and wash-leather, are requisite for cleaning plate; if the powder be mixed with spirits of wine laid on with a sponge, and rubbed off with wash-leather, all tarnish will be removed. Salt stains and marks from eggs are more difficult to remove. It is a good plan to boil a fine soft old cloth in water with some prepared chalk dissolved in it, and to dry the cloth and use it for polishing. The soft brush is for the same purpose, the hard brush being for chased work, edges, crests, &c., so that not a portion of dry powder may remain in them. Plate should in all cases be finished with a fine dry wash-leather. Plated articles should be carefully wiped dry after washing them, otherwise they will rust or canker at the edges, where the silver first wears off, and on this account also, they should be cleaned as seldom as possible.

PLATE WARMER.—A useful apparatus for warming plates and dishes, either in the kitchen or the dining-room. Those used in the kitchen may be fitted up on the fire-screen on a small scale; these are made of wood lined with tin, and may have a door in the back to take out the plates and dishes. The kind of plate warmer, however, which

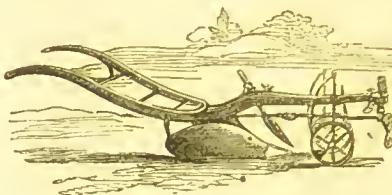


is most generally used is the one seen in the engraving, and which is both useful and ornamental.

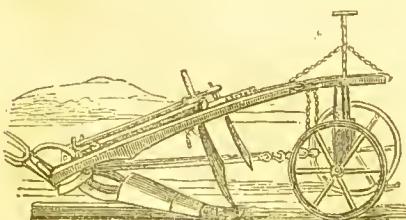
PLEURISY.—Inflammation of the lining membrane of the chest, or the *pleura*, as it is called. This disease is so analogous to inflammation of the substance of the lungs, or pneumonia, as to be a matter of difficulty for medical men sometimes to detect the difference; and as the treatment is almost the same, the two diseases will be treated under one head: see PNEUMONIA. The only special peculiarity in pleurisy is, that being an inflammation of a serious membrane, the pain is more acute, and the pulse harder and sharper than in the corresponding disease of the substance of the lungs, where the pain is deeper, the breathing more oppressed and the pulse fuller and softer, than in pleurisy.

PLOUGH.—In this well-known agricultural implement, various improvements have been from time to time introduced. In Kent the turn-wrist plough is common, and is considered superior to all others for its particular purposes. It is intended for under-surface ploughing, so as to clear

in a hue with the common furrows, and it may be used so as to lay the stitches on lands rounding or flat, as desired. This implement lays the furrows all in the same direction from one side of the field to the other, and this is effected by the alteration of the wrist, which occupies to a considerable extent the place of the ordinary mould-board, laying over the seam in the same way. In Howard's Prize Plough the improvements consist in greater elegance of



design, more equal proportions, and the furrow-turners being made particularly tapering and regular in their curve, and formed upon exact geometrical principles; the furrow-slice is thus made to travel at a uniform rate, from its being first cut, until left in its final position, the power required to work the implement is considerably lessened, and the furrows are laid more evenly and in the best form to receive the seed, as well as working much cleaner upon land inclined to adhere or load to the breast or furrow-turner. The shares are fixed to lever necks of wrought-iron, made upon an improved principle, the raising or lowering of which gives the point greater or less "pitch," or inclination, as the share wears or as the state of the land may require. The superiority of this lever neck over others is its great simplicity, and its being tightened at the end instead of by a bolt through the side. When raised or lowered (which can be done instantly) it is secured in a series of grooves; the iron is thus brought into a state of tension, ensuring firmness as well as increasing strength. The centre pin upon which the lever works is a fixture to the neck, and takes its bearing close to the head or socket of the share, so that the top of the share is not raised above or below the point of the breast when moved into higher or lower grooves. The lever neck has another great advantage over any other, the accumulation of earth inside the plough, in most instances, renders the lever useless, as it cannot be moved without a great deal of trouble, but in this arrangement by simply taking off the end next the neck, it may be at once disconnected from the plough, and any obstacle preventing its free action removed. The axles of the wheels are upon a new principle, and are made so that no grit can enter, nor any oil or grease escape. The wheels, therefore, wear much longer, the axles require little or no repairing, and the friction is considerably reduced. The mode of fixing the wheels is also peculiar. The holdfasts, or clumps securing them, are made to slide



the ground from grass and rubbish, as well as to loosen the soil. It is adapted for crossing the ridges, as well as for ploughing

through a mortise formed in the beam, by which the width may be altered with greater facility, besides dispensing with the old sliding axle, which was an obstacle in deep ploughing, and objectionable on dirty land on account of the soil accumulating round it. The wheels, by the method now adopted, are brought opposite to each other, and the land-wheel may be expanded as well as the furrow-wheel.

PLOVER, TO DRESS.—This bird is roasted in the same way as the snipe and woodcock, without drawing, and are served on toast.

PLOVER'S EGGS.—Boil them for ten minutes, and serve them either hot or cold on a napkin.

PLUM CAKE.—This is such a favourite article in most families, and is made in so many different ways, that it will be necessary to give a variety of receipts in order that a selection may be made according to circumstances. 1. *A good common plum cake.*—Mix five ounces of butter in three pounds of fine dry flour, and five ounces of the best moist sugar. Add six ounces of currants, washed and dried, and a quarter of an ounce of pimento finely powdered. Put three tablespoonfuls of yeast into a pint of new milk warmed, and mix it with the foregoing into a light dough. 2. *A cake of a better sort.*—Mix thoroughly a quarter of a peck of fine flour well dried, with a pound of sifted loaf sugar, three pounds of currants washed and very dry, half a pound of raisins stoned and chopped, a quarter of an ounce of mace and cloves mixed, a nutmeg grated, the peel of a lemon cut as finely as possible, and half a pound of almonds blanched and beaten with orange-flower water. Melt two pounds of butter in a pint and a quarter of cream, but not too hot; add a pint of sweet wine, a glass of brandy, the whites and yolks of twelve eggs beaten apart, and half a pint of good yeast. Strain this liquid by degrees into dry ingredients, beating them together a full hour, then butter the pan, place the cake in, and bake it. 3. *A rich plum cake.*—Take three pounds of well-dried flour, three pounds of fresh butter, a pound and a half of fine sugar dried and sifted, five pounds of currants carefully cleaned and dried, twenty-four eggs, three grated nutmegs, a quarter of an ounce of pounded mace and cloves mixed, half a pound of almonds, a glass of sherry, and a pound of citron or orange-peel. Pound the almonds in rose-water, work up the butter to a thin cream, put in the sugar and stir it well, add the yolks of the eggs, the spices, the almonds, and the orange-peel. Beat the whites of the eggs to a froth, and put them into the batter as it rises. Keep working it, with the hand until the oven is ready, and the scorching subsided; put it into a hoop, but not full; two hours will bake it.

4. *Another rich plum cake.*—Take four pounds of flour well dried, mix with it a pound and a half of fine sugar powdered, a grated nutmeg, and an ounce of bruised mace. When these are well mixed, make a hole in the middle, and pour in the yolks of fifteen eggs, and the whites of seven, well beaten with a pint of yeast, four tablespoonfuls of orange-flower

water, and a wineglassful of sherry. Then melt two pounds and a half of butter in a pint and a half of cream; and when it is milk-warm, pour it into the middle of the batter. Throw a little of the flour over the liquids, but do not mix the whole together till it is ready for the oven. Let it stand before the fire to raise for an hour, laying a cloth over it; then have ready six pounds of currants well washed, picked, and dried; a pound of citron and a pound of orange-peel sliced with a pound of blanched almonds, half cut in slices lengthwise, half finely powdered. Mix all thoroughly together, butter the tin well, and bake it for two hours and a half.

4. Butter, 5ozs.; flour, 3lbs.; sugar, 5ozs.; currants, 6ozs.; pimento, $\frac{1}{2}$ oz.; yeast, 3 tablespoonfuls; milk, 1 pint. 2. Flour, $\frac{1}{2}$ peck; sugar, 1lb.; currants, 3lbs.; raisins, $\frac{1}{2}$ lb.; mace and cloves (mixed), $\frac{1}{2}$ oz.; nutmeg, 1; lemon, peel of 1; almonds, $\frac{1}{2}$ lb.; butter, 2lbs.; cream, $1\frac{1}{2}$ pint; sweet wine, 1 pint; brandy, 1 wineglassful; eggs, 12; yeast, $\frac{1}{2}$ pint. 3. Flour, 3lbs.; butter, 3lbs.; sugar, $1\frac{1}{2}$ lb.; currants, 5lbs.; eggs, 24; nutmegs, 3; mace and cloves (mixed), $\frac{1}{2}$ oz.; almonds, $\frac{1}{2}$ lb.; sherry, 1 wineglassful; citron or orange-peel, 1lb.; rose water, sufficient. 4. Flour, 4lbs.; sugar, $1\frac{1}{2}$ lb.; nutmeg, 1; mace, 1oz.; eggs, 15 yolks, 7 whites; yeast, 1 pint; orange-flower water, 4 tablespoonfuls; sherry, 1 wineglassful; butter, $2\frac{1}{2}$ lbs.; cream, $1\frac{1}{2}$ pint; currants, 6lbs.; citron, 1lb.; orange-peel, 1lb.; almonds, 1lb.

PLUM CULTURE OF.—Most of the varieties of this fruit are propagated by grafting or budding on the muscle St. Julian. Magnum Bonum, or any free-growing plums, raised from seed or from suckers; but seedlings are preferable stocks for a permanent plantation. The common baking plums are generally propagated by suckers, without being either budded or grafted. Plum-grafting is performed either in February or March; budding in July or August. The soil most suitable to the plum is a middling one, neither too light nor too heavy; any mellow fertile garden or orchard ground will do, and where a soil is to be made, it is best composed of one-half fresh loam, one-fourth sharp sand, one-sixth road-stuff, and one-twelfth vegetable remains, or decomposed dung or animal matter. The plum is cultivated like other indigenous fruit trees; the hardier sorts, as standards; and the finer varieties against walls. The choice of plants should be confined to trees of not more than one year's growth from the bud; for if they are older they are very subject to canker; or, if they take well to the ground, commonly produce only two or three luxuriant branches. The final planting should be performed in autumn. In training, the horizontal mode is to be preferred, and it is necessary to observe, that the branches springing from the stem should be allowed to take their natural angle of divergence in the first instance. From this, the upper and stronger branches may be more quickly turned than the lower and weaker. Plums may be forced in pots or otherwise like other fruit trees. When an early crop is desired, plums are best

forced in large pots or tubs, as this method admits of their removal at pleasure into different degrees of temperature as occasion may require; but for a general crop to ripen by the end of May or beginning of June, it is preferable to have the trees planted in the forcing-house, and if they are intended to be forced in the first year, proper trees for the purpose, furnished with well-branching wood, should be selected and planted early in autumn, that they may establish themselves before the winter sets in.

PLUM JAM.—Cut some ripe plums to pieces, put them into a preserving pan, bruise them with a spoon, warm them over the fire till they are soft, and press them through a cullender. Boil the jam for an hour, stir it well, add six ounces of fine powdered sugar to every pound of jam, and take it off the fire to mix it. Then heat it ten minutes, put it into jars, and sift some fine sugar over it.

PLUM PUDDING.—This national dish is prepared in a variety of ways, the following being the best receipts:—1. Take a pound of fresh beef-suet, very finely minced, a pound of raisins stoned and chopped, a pound of currants cleaned and dried, a pound of flour, the grated peel of a lemon, half of a nutmeg, six well-beaten eggs, an ounce of candied orange-peel and half an ounce of candied lemon-peel minced, half a pound of brown sugar, a wineglassful of brandy and a teacupful of cream. Mix all the ingredients well with the flour. Boil the pudding in a cloth, put it into a copper of boiling water, and keep it boiling for seven hours. Before serving, strew grated loaf sugar over it. 2. A pound of raisins stoned, half a pound of currants well cleaned, a pound of fresh beef suet finely minced, five tablespoonfuls of grated bread, three tablespoonfuls of flour, two of brown sugar, one teaspoonful of pounded ginger, one of cinnamon and one of salt; six eggs well beaten, and a gill of rum, mix these thoroughly together the day before it is to be boiled. Boil it in a cloth or mould for four or five hours. 3. Take a pound of the best raisins stoned, and a pound of currants; chop very small a pound of fresh beef-suet, blanch and pound two ounces of sweet almonds and half an ounce of bitter ones; mix the whole well together with a pound of sifted flour, and the same weight of crumb of bread soaked in milk, squeeze it dry and stir with a spoon until reduced to a mash, before it is mixed with the flour. Cut into small pieces two ounces each of preserved citron, orange, and lemon-peel, and add a quarter of an ounce of mixed spice; put a quarter of a pound of moist sugar into a basin with eight eggs, well beaten; stir this with the pudding, and make it of a proper consistence with milk. Pour a gill of brandy over the fruit and spice, mixed together in a basin, and allow it to stand for three or four hours before the pudding is made, stirring occasionally. Tie it in a cloth, and boil it for five hours. 4. Take half a pound of grated bread, a quarter of a pound of finely-minced suet, a tablespoonful of flour, half a pound of currants, two ounces of brown sugar, and a wineglass-

ful of brandy; mix all together with a sufficient quantity of milk to make it into a stiff batter; boil it in a cloth for four hours.

1. Suet, 1lb.; raisins, 1lb.; currants, 1lb.; flour, 1lb.; lemon, peel of 1; nutmeg, $\frac{1}{2}$ of 1; eggs, 6; candied orange-peel, 1oz.; candied lemon-peel, $\frac{1}{2}$ oz.; sugar, $\frac{1}{2}$ lb.; brandy, 1 wineglassful; cream, 1 teacupful.
2. Raisins, 1lb.; currants, $\frac{1}{2}$ lb.; suet, 1lb.; bread grated, 5 tablespoonfuls; flour, 3 tablespoonfuls; sugar, 2 tablespoonfuls; ginger, 1 teaspoonful; cinnamon, 1 teaspoonful; salt, 1 teaspoonful; eggs, 6; rum, 1 gill.
3. Raisins, 1lb.; currants, 1lb.; suet, 1lb.; almonds, sweet, 2oz.; bitter, $\frac{1}{2}$ oz.; flour, 1lb.; bread crumb, 1lb.; milk, sufficient; citron, candied orange and lemon-peel, 2ozs. each; mixed spice, $\frac{1}{2}$ oz.; sugar, $\frac{1}{2}$ lb.; eggs, 8; brandy, 1 gill.
4. Bread, grated, $\frac{1}{2}$ lb.; suet, $\frac{1}{2}$ lb.; flour, 1 tablespoonful; currants, $\frac{1}{2}$ lb.; sugar, 2ozs.; brandy, 1 wineglassful.

PLUMS PRESERVED.—Select the sort called magnum bonum. Set them over a slow fire in spring water until they begin to peel, keeping them under the water; peel and put them into a jar with thin syrup, which must cover them, or otherwise they will be discoloured. The next day boil the syrup, then put in the plums and give them a gentle boil. Let them stand till cold, then repeat the process; turn them in the syrup until nearly cold. Take out the plums, strain the syrup, add more sugar, and skim it well; put in the plums, boil them till they are clear, then pot them, and cover them with paper.

PNEUMONIA.—This disease is an acute inflammation of the substance of the lungs, and so far different from Pleurisy, as that is the inflammation of the *bag or membrane* that contains the lungs, and lies at the same time the whole cavity of the chest. The symptoms that indicate inflammation of these organs, are pain in the chest, extending to the shoulders and back, and becoming more acute as the disease advances, a constant and anxious difficulty of breathing, augmented by a recumbent, and relieved, or less severe, when the body is placed in an erect position, attended with a sense of distension and fulness of the lungs, which nature attempts to relieve by a frequent and abortive cough; the face becomes tumid, and the lips livid; the pulse being quick, full, and round in pneumonia, and quick, hard, and sharp in pleurisy. The pain may be either under the breastbone or at either side, or in all places at once; there is much thirst, great anxiety, and a tongue either dry and rough, or moist and white. The other organs suffer sympathetically, such as the head and skin, when the former is the case, and there is much congestion, as indicated by throbbing in the temples, heat, and pain; the prognosis of the disease is unfavourable, as delirium may supervene, always a serious symptom. But as respects the skin, which is nothing more than an extended surface-lung, it always suffers to a greater or less degree in this disease; and as all affections of the skin reciprocally affect the lungs, the cuticle, in pneumonia, becomes dry, rough, and extremely sensitive to cold.

Inflammation of the lungs may exist without pain, as in the peripneumonia notha of old age; but in youth and adult periods, this is rare.

The treatment of this disease demands great judgment; that bleeding is often necessary, no one will deny who bears in mind the vital function of the organ; but it should not be carried too far, or if possible, be repeated. When the great object of the treatment is borne in mind, the mode of after-management will be more intelligible, viz., that the chief and foremost consideration is to relieve the overcharged lungs of the excess of blood accumulated in their vessels; which, by pressure on the nerves of the organ, causes not only the pain, and by obstructing the air passages, impedes respiration, inducing difficulty of breathing, but preventing the blood from circulating through the structure of the lungs. When it is remembered that the skin is only another kind of lung, and that in this disease it is cold, rough, and dry, indicating the absence of its natural blood, drawn off from the surface to flood the lungs; it will then easily be comprehended that a hot bath, by bringing back the circulation to the surface, must unload the lungs, and by equalizing the powers, afford immediate relief from pain, and the general amelioration of all the other oppressive symptoms. Very great is the benefit produced by the hot bath, in relieving the oppressed organ, and throwing the superabundance of blood on the skin, where it can in turn be got rid of in the form of perspiration, and by a sharp action on the bowels, as a purgative, be removed from the system before its accumulation in the cuticle could produce any hurtful consequences, or reciprocally re-act on the lungs. So great indeed is the benefit of the bath, that if the effect could be continued long enough, no other mode of treatment than a hot bath and a purgative would be needed to cure this dangerous disease. Still, it must be understood that this means is one of the first remedies to be adopted, and if immediately employed after bleeding, when that measure is rendered necessary by the urgency of the symptoms, two of the most important moves in the system of treatment will have been adopted. The bath should be used for five or seven minutes, and the temperature of the water kept, up to the last moment, to the same heat as when first used. The patient should be folded in a blanket undried and placed in bed, that perspiration may be induced; the subjoined pills, and a dose of the accompanying mixture, being given before he is left in repose. Take of

Extract of colocynth	12 grains
Calomel	8 grains
Croton oil	1 drop

Make into a mass with extract of henbane, and divide into 4 pills, two of which are to be given for a dose, and repeated the following day if required. Take of

Powdered nitre	30 grains
Tartar emetic	4 grains

Dissolve in—

Camphor water	5½ ounces
Laudanum	1 drachm
Syrup of saffron	½ ounce

Mix, and give two tablespoonfuls after the pills, and one tablespoonful every two hours afterwards. The feet should be kept constantly hot; and if, after a few hours, the pain in the chest continues, from six to twelve leeches should be applied to the part over each lung: or a blister may be substituted for the leeches. The thirst is to be mitigated by effervescent draughts, made by dissolving twenty grains of the carbonate of potass in half a tumbler of water, and adding fifteen grains of powdered citric acid, or the same quantities of carbonate of soda and tartaric acid. In cases where the pain and inflammatory symptoms are strong, and the physical state of the patient too weak to admit of excessive depletion with safety, one of the following pills may be given every four hours in addition to the mixture and dose of purgative pills. Take of

Calomel	12
Opium, powdered	5 grains

Extract of henbane, enough to make into a mass, which is to be divided into six pills, which are to be discontinued as soon as the urgency of the symptoms is subdued. To recapitulate: the treatment of pneumonia should commence with bleeding to the extent of from twelve, fifteen, or twenty ounces, the hot bath, the purgative pills, and the saline fever mixture; in extreme cases, using in addition the calomel and opium pills, and leeches, or a blister on the chest; but in all cases allaying the thirst with cooling driuks and effervescent draughts. During the whole treatment the patient should be kept in bed, remarkably quiet, and on the thinnest and least exciting diet; the skin, as much as the lungs, being guarded against exposure to damp or cold; and as this disease is very prone to recur, every precaution must be taken during convalescence, not to let the patient be exposed to causes that might renew so serious a complaint.

POCKET.—A receptacle forming a portion of male and female attire, for keeping articles in safety. Pockets in which money and valuable articles are kept, should be so placed that they are difficult of being rifled. The pockets worn by females afford great facilities for robbery, and it would be a wise provision if every dress were made with a pocket near the waistband, so that it might be under the wearer's immediate control and protection.

POCKET BOOK.—A book in which bank-notes, cheques, bills, and valuable documents are usually kept. The best kind of pocket-book is one that is not too large, and may be easily introduced into a pocket made inside the breast of the coat or waist-coat. It is a good plan to write the name and address of the owner in the pocket-book itself, so that if it be lost and fall into the hands of honest persons it may be the more readily restored.

POINTER.—A species of dog evidently descended from the hound. It is more perfectly under the control of the sportsman than any other dog, but this degree of per-



fection is arrived at by dint of education and training, which process is comprised in the following rules:—The first lesson inculcated is that of passive obedience, and this enforced by the infliction of severity as lenient as the case will admit. The dog is taken into a garden or field, and a strong cord about eighteen or twenty yards long is tied to his collar. The sportsman calls the dog to him, looks earnestly at him, gently presses him to the ground, and several times will make him *down* immediately, and take him to the place where the birds rose. Hide him with "Steady!" "How dare you?" Use no whip, but scold him well, and be assured that he will be more cautious. If possible, kill on the next chance. The moment the bird is down, the dog will probably rush in and seize it. He must be met with the same rebuff, "Down charge!" If he do not obey, he must receive a stroke of the whip. The gun being again charged, the bird is sought for, and the dog is allowed to see it and play with it for a minute before it is put in the bag. He will become thoroughly fond of the sport, and his fondness will increase with each bird that is killed. At every time, however, whether he kills or misses, the sportsman should make the dog "Down charge!" and never allow him to rise until he has loaded. If a hare should be wounded, there will, occasionally, be considerable difficulty in preventing him from chasing her. He must be checked with "'Ware chase,'" and if he does not attend, the sportsman must wait patiently. He will by-and-by come slinking along with his tail between his legs, conscious of his fault. It is one, however, that admits of no pardon. He must be secured, and while the field echoes with the cry of "'Ware chase,'" he must be punished to a certain, but not to too great an extent. The castigation must be repeated as often as he offends; or, if there be much difficulty in breaking him of the habit, he must be got rid of. By attention to the rules here laid down, the person whose circumstances only permit him occasionally to shoot over his little demesne,

may very readily educate his dog, without having recourse to keepers or professional breakers. Generally speaking, no dog is half so well broken as the one whose owner has taken the trouble of training him. The owner of any considerable property will naturally look to his keeper to furnish him with dogs on which he may depend, and he ought not to be disappointed; for those which belong to other persons, or are bought at the beginning of the season, will too often be found deficient. The scholar being thus prepared should be taken into the field, either alone or with well-trained steady dog. When the old dog makes a point, the master calls out "Down!" or "Sohio!" and holds up his hand and approaches steadily towards the birds: and if the young one runs in, or prepares to do so, as probably he will at first, he again raises his hand and calls out "Sohio!" If the youngster pays no attention to this, the whip must be used, and in a short time he will be steady enough at the first intimation of the game. If he springs any birds without taking any notice of them, he should be dragged to the spot from which they rose, and, "Sohio!" being cried, one or two sharp strokes with the whip should be inflicted. If he is too eager, he should be warned to "Take heed." If he runs with his nose near the ground, he should be admonished to hold up, and if he still persists the muzzle-peg may be resorted to. The best plan to accustom dogs to the gun, is occasionally to fire off one while they are being fed. When the dog has grown tolerably steady, and is taught to come at the call, he should also learn to range and quarter his ground. Let some clear morning, and some place where the sportsman is likely to meet with game, be selected. Station him where the wind will blow in his face; wave your hand and cry "Heigh on, good dog!" Then let him go off to the right about seventy or eighty yards. After this, call him by another wave of the hand, and let him go the same distance to the left. Walk straight forward with your eye always upon him; then let him continue to cross from right to left, calling him in at the limit of each range. In doing this, the same ground should never be twice passed over. The sportsman watches every motion, and the dog is never trusted out of sight or allowed to break fence. When this lesson is tolerably learned, he may, on some good scenting morning early in the season, take the field, and perhaps find. Probably he will be too eager, and spring upon his game. A loud but not an angry voice says, "Down!" or "Down charge!" The dog does not know the meaning of this, and struggles to get up; but as often as he struggles, the cry of "Down charge!" is repeated, and the pressure is continued or increased. This is continued a longer or shorter time, until the dog, finding that no harm is meant, quietly submits. He is then permitted to rise; he is patted and caressed, and some food is given him! The command to rise is also given in the terms "Heigh up!" A little while afterwards the same process is repeated, and the dog struggles less, or

perhaps ceases to struggle altogether. The attachment of the dog should be gained by frequently feeding and caressing him, and giving occasional hours of liberty; but every now and then inculcating a lesson of obedience, teaching him that every gambol must be under the control of the master; frequently checking him in the midst of his gambols with the order of "Down charge!" pattering him when he is promptly obedient; but scolding or moderately chastising him, when there is any reluctance to obey. The dog is then suffered to run over the field, seemingly at his pleasure, when suddenly comes the warning "Down!" He perhaps will pay no attention to it, until he is seized by his master, forced on the ground, and is menaced with the order of "Down!" somewhat sternly uttered. After a while he is suffered again to get up. He soon forgets what has occurred, and gallops away with as much glee as ever. Again the "Down!" is heard, and again little or no attention is paid to it. His master once more lays hold of him and forces him on the ground, and perhaps inflicts a slight blow or two, and this process continues until the dog finds that he must obey the command of "Down charge!" The owner should now walk from the dog a little way backward with his hand lifted up. If the dog make the slightest motion, he must be sharply spoken to, and the order peremptorily enforced. He must then be taught to "Back," that is, to come behind his master when called. When he appears to understand all this, he is called by his master in a kindly tone, and patted and caressed.

POISONS.—Those substances which, when taken into the human body, or applied externally, always produce such an effect or disturbance in the animal economy, as to induce disease, or a chain of symptoms that if uncorrected would eventuate in serious mischief to the health of the body, or even induce death. Or, to simplify the explanation; a poison is any agent capable of producing a morbid, noxious, or dangerous effect upon anything endowed with life. All poisons are common or relative: by the first, is understood those substances which produce morbid, or dangerous symptoms on all conditions of animal life, on man as well as the brute, on the fish as well as the fowl. By relative poisons is understood those agents which are only poisonous to man, or some particular species of animals; thus aloes, which is a useful medicine to man, is a poison to dogs and wolves; and others which are deadly to the horse, form a nutritious food to the ox. As an instance of the common poisonous agent, affecting all animals in the same manner, may be advanced arsenic and corrosive sublimate. Agents or substances are poisonous only in regard to their dose, the part of the body they are applied to, and the subject on which they are applied.

To illustrate these facts, it is sufficient to say that both arsenic and corrosive sublimate are valuable medicines in certain modified doses, while in excess, they are deadly; secondly, a poison to the stomach may be

innocuous to the lungs, or what would be fatal to the integrity of the system, applied to one part of the body, is harmless when administered to another; thus the carbonic acid gas which we imbibe with exhilarating satisfaction with our malt-liquor, soda water, and champagne, is a deadly poison if instead of going down the gullet, it should descend the windpipe, and enter the lungs. There are only four ways by which a poison can enter the system, and prove injurious or fatal to life; of these the most common is by the mouth into the stomach, by the air passages into the lungs, by absorption through the skin, either in its natural state, or from an abrasion or scratch; and lastly by the bowels, from an enema. But whichever way they enter the system, they only re-act upon it in two forms of action; that is, that they are either absorbed into the blood, and conveyed by the circulation to the part or parts affected, or they produce an immediate influence on the nerves of the part with which the poison first comes in contact; and by a sympathetic action affect the whole nervous system. Poisons may belong to either of the three kingdoms, the animal, mineral, and the vegetable, but as the symptoms produced are sometimes nearly the same, from whichever class or kingdom they may be derived, it has become the custom to arrange the several poisons according to the most characteristic effect they produce on the animal economy, and to divide them into the IRRITANT POISONS, the NARCOTIC POISONS, and the NARCOTIC-ACRID POISONS, thus embracing all deleterious substances under one or other of the above classes.

IRRITANT POISONS

Are those that excite inflammation in some part, or the whole of the alimentary canal.

Nitric acid	Compounds of lead
Muriatic acid	Ditto of copper
Sulphuric acid	Baryta
Phosphorus	Euphorbia
Sulphur	Castor oil seeds
Chlorine	Croton
Iodine	Bryony
Hydriodate of potass	Colocephaly
Bromine	Elaterium
Oxalic acid	Ranunculus
The fixed alkalis	Anemone
Nitre	Clematis
Alkaline and earthy chlorides	Mezereon
Lime	Cuckoo-pint
Ammonia and its salts	Gamboge
Alkaline sulphurets	Savin
The compounds of arsenic	Cattha
Compounds of mercury	Poisonous fish
Ditto of antimony	Venomous serpents and insects
Ditto of tin, zinc, silver, bismuth, and chrome	Daffodil
	Jalap
	Cathartides
	Decayed animal matter
	Mechanical irritants.

NARCOTIC POISONS.

Are those poisons that produce an immediate

and continued disorder of the nervous system.

Opium
Lactaea
Solanum
Nitric oxide gas
Chlorine gas
Ammoniacal gas
Sulphuretted hydrogen
Carbonic acid
Cyanogen

Hyoscyamus
Hydrocyanic acid, and all vegetables producing it, as bitter almonds, cherry laurel, peach, and mountain ash, carbonic oxide, and oxygen.

NARCOTIC-ACRID POISONS.

The poisons of this class produce a double action, that of a local irritation, and a secondary, or after effect on the nervous system.

Nightshade
Hemlock
Tobacco
Water hemlock
Monkshood
Squills
Ipecacuanha
Meadow saffron
Foxglove
Nux vomica
Camphor
Cocculus indicus
Upas
Seeale cornutum

Darnel grass
Alcohol
Ether
Thom-apple
Fool's-parsley
Hellebore, black
Hellebore, white
Strychnia
False angustura
Poisonous fungi
Mouldy bread
Seeds of the laburnum, and some cmyprumatic oils

Though chemistry has of late years made great progress in the science of analysis, vegetable poisons are so soon eliminated from the body, as to leave hardly any trace for the chemist's tests to re-act upon, and the mineral poisons may be regarded as almost the only class on which science can operate with invariable certainty. The first duty of any one called to act in a case of poison, is to administer an antidote, of which there are supposed to be two; one, which given immediately, will chemically destroy the virulence of the poison; as in the case of a person who has swallowed a powerful acid, the exhibition of chalk will destroy the potency of the acid, by forming a new and harmless compound. And antidots or drugs in many instances of a problematical effect, which are supposed to have the power of neutralizing the effect produced on the system, by the agency of the poison, and restoring the disorganised body to a pure and pristine health. Of this class of drugs once implicitly believed in, science has found few or any to bear the test of a rigid experieeue. To leave theory, and come at once to the practical, the first care of any one, when an individual has voluntarily, or by accident taken a poison, or any known or suspected deleterious substance, is to procure its instant evaeuation from the system, by vomiting. In many cases either the drug itself, or the over-dose of it, excites this remedial step, and if so, the attendant should encourage the action of the stomach by all the means immediately procurable; or if that vomiting has not set in, to excite it at once, either by warm water in frequent draughts, or should that not be present, by

a draught of mustard and water, or a few spoonfuls of common salt dissolved in water; or should neither of these be in readiness, and while water is heating, and medical aid, or other means is being sought, give copious draughts of cold water, and by the feathery part of a quill tickle the fauces, or with the handle of a spoon press down the root of the tongue; when the contents of the stomach must be ejected. This process may be repeated; and even without further means, the poison may in this way be ejected from the stomach. In cases where vegetable, or what are called narcotic, poisons have been taken, it is sometimes extremely difficult, if not impossible, to produce vomiting, though attempted with proper emetics; in all such, in fact in all vegetable poisons, the stomach pump becomes imperative, and the most valuable of agents, as it not only fills the stomach with water, but immediately after relieves it of that, and whatever poisonous matters it may hold in suspension or solution. This process of filling the stomach with tepid water, and again expelling it, must be continued till all apprehension that more poison remains, is removed from the mind of the operator. In cases of poisoning by narcotic and vegetable substances, to empty the stomach is the first, last, and most important duty, and till the chief agent, the stomach pump, can be procured, some of the means already advised should be adopted, but where more perfect remedies are at hand they should be employed; of such the best emetics for a vegetable poison are the minerals, especially the white vitriol or sulphate of zinc, twenty or thirty grains of which, dissolved in half a tumbler of warm water, will be found to act almost instantly. To rouse the energies after the ejection of the poison, electricity should, when possible, be applied; stimulants such as ammonia, hot coffee, or camphor administered; and, when necessary, aspersions of cold water, and the patient constantly kept moving. In other cases blisters or hot mustard plasters must be applied to the spine, thighs, feet, or stomach; according to the nature and potency of the poison. In irritant or corrosive poisons, concurrent with the vomiting, which when not induced by the poison itself, should be at once excited, agents to neutralize the virulence of the poison must be administered, and again repeated after each vomiting, to be in turn ejected, again taken, and again discharged. In all poisonings of this class, proceeding from the mineral acids or corrosive compounds, when proper emetics are at hand the vegetable, such as ipecacuanha, is the most efficacious, twenty or twenty-five grains of which, dissolved in warm water will be found an effective dose; while as a corrective to the corroding nature of the poison, draughts of tepid water, in which shavings of brown soap have been scraped must be drunk frequently, or half tumblers of water in which half a teaspoonful of soda, either the common or carbonate, or the same quantity of ordinary potass; frequent draughts of milk or mucilage, treacle, honey and water; or should none of these articles

be at hand, spoonfuls of chalk and water, and in still more extreme cases, when no other aid is at hand to relieve the burning agony induced by the poison, the plaster from the wall or ceiling should be broken down, and mixed in water, given to the patient to neutralize the activity of the poison. Such are the general means adopted to eject the poison from the system; special poisons, however, require particular and special notice.

ARSENIC.—In addition to the vomiting, should be treated with the white of eggs mixed in water, and administered every ten minutes; or honey, treacle, sugar and water or milk.

OXALIC ACID.—New milk must be given in frequent draughts after each fit of vomiting, or chalk and water.

CORROSIVE SUBLIMATE AND VERDIGRIS are treated nearly in the same manner as arsenic; the chief antidotes being white of eggs, milk and sugar and water; though for verdigris, iron filings dissolved in vinegar, and mixed with mucilage, is generally preferred for this rarely employed poison.

NITRATE OF SILVER, or LUNAR CAUSTIC.—The best antidote, concurrent with the emetic, is common table salt, dissolved in water, and taken frequently. A teaspoonful of salt in a wineglass of water is to be given every half hour.

SULPHURIC, MURIATIC, or NITRIC ACID, or what are called the MINERAL ACIDS, require like oxalic acid, milk, but especially, magnesia, chalk, and soap or mucilage, but primarily magnesia.

HYDROCYANIC ACID, or PRUSSIC ACID.—Where this drug is not immediately fatal, and has only been taken in moderate quantity, the only antidotes are powerful stimulants of brandy, ammonia, and ether; and as emetics are valueless in this poison, sudden effusions of cold water must be adopted with stimulants to the stomach.

In all cases of poisoning by vegetable matter, whether acrid or narcotic, the first duty is to encourage the sickness, if set in, by warm water, and where the power of the stomach has been paralysed by an excessive dose, instantly to promote vomiting by a full dose of sulphate of zinc or white vitriol, in a dose varying from 20 to 30 grains, or else 10 or 15 grains of sulphate of copper or blue stone; but neither antimony nor ipecacuanha. When the stomach has been well evacuated, strong infusions of coffee, or draughts of vinegar and water are to be given occasionally. In all cases of corrosive or acrid poisons, when the lower bowels are affected, it becomes necessary to employ enemas of a soothing and corrective nature. All that the non-professional person can do in any case of poisoning, till the arrival of medical advice, is to empty the stomach of the hurtful matter by the quickest and readiest aids; and when emetics are not at hand, such natural and domestic means are to be resorted to as can be the easiest obtained; warm water, mustard, salt, tickling the gullet with a feather, or pressing down the tongue with a spoon, as already advised.

It should be borne in mind, that for mineral poisons *vegetable* emetics are to be used, and for vegetable poisons *mineral* emetics: that in cases of poisoning from the mineral acids, it is useless to give emetics, and dangerous to administer water alone; in such cases, such articles are to be given as will counteract the corrosive virulence of the acid, and convert it into an inert compound, such as magnesia, soda, chalk, soap, or in extremity of nicens, the plaster from the walls: that where prussic acid has been taken, emetics are equally valueless; the prostrated powers are to be raised by powerful stimulants, and the means already indicated. For the poisons that are applied externally, and prove hurtful by absorption, such as the bite or sting of venomous reptiles, the first duty of an assistant is to tie a garter tape, or some ligature tightly round the limb, a few inches above the wound, next to wash it immediately with warm water, and then, if there are no cracks in the lips or gums, fearlessly to apply the mouth to the bitten part, and slowly and steadily suck it; washing the mouth with cold water every time there is a rest, and the contents are spit out. When cupping glasses are at hand, they should be applied instead of the mouth; in either case, the part, after being sucked or cupped, is to be well rubbed over with lunar caustic, a warm poultice laid upon the place, the limb kept at rest, and, a few hours after, the bandage or ligature removed. See CUPPING. For the poisonous sting of gnats, bees, wasps, and other insects, a piece of lint, wetted in the pure extract of lead, is all that is necessary to cure one or the other. For the sickness, lassitude, and fainting, that often follow the sting of reptiles, it is requisite to administer ether, brandy, and ammonia, and sometimes opium. For the special action, and symptoms of particular poisons, see the article under which it is treated, as ARSENIC, SUBLIMATE, &c.

POLITICAL ECONOMY.—Books: *Mill's Elements*, 3s. 6d.; *McCulloch's Literature*, 14s.; *De Quincy's Logic*, 7s. 6d.; *Sedgwick's Public and Private*, 5s.; *Parker's Questions*, 6s. 6d.; *Newman's Essay*, 7s. 6d.; *Mathus's Treatise*, 3s. 6d.; *Merivale's Essay*, 2s.; *Senior's Lectures*, 5s.; *Whateley's Essay*, 8s.; *Chalmers's Treatise*, 6s.

POLKA.—A popular dance, in which there are but two principal steps, all others belong to fancy dances. *First step:* the gentleman raises the left foot slightly behind the right, the right foot is then jumped upon, and the left brought forward with a glissade. The lady commences with the right, jumps on the left, and glissades with the right. The gentleman during this step has hold of the lady's left hand with his right. *Second step:* the gentleman lightly hops the left foot forward on the heel, then hops on the toe, bringing the left foot slightly behind the right. He then glissades with the left foot forward; the same is then done commencing with the right foot. There are a variety of other steps of a fancy character, but they can be only understood with the aid of a master, and even when well studied, must be introduced with care. The polka should be danced with grace and elegance, eschewing

all extravagant and ungainly steps and gestures, taking care that the leg is not lifted too high, and that the dance is not commenced in too abrupt a manner. Any number of couples may stand up, and it is the privilege of the gentleman to form what figure he pleases, and vary it as often as his fancy and taste may dictate. *First figure:* four or eight bars are devoted to setting forwards and backwards, turning from and towards your partner, making a slight stop at the commencement of each set, and holding your partner's left hand; you then perform the same step forwards all round the room. *Second figure:* the gentleman faces his partner, and does the same backwards all round the room, the lady following with the opposite foot, and performing the step forwards. *Third figure:* the same as the second figure, only reversed, the lady stepping backwards and the gentleman forwards, always going the same way round the room. *Fourth figure:* the same step as figures two and three, but turning as in a waltz.

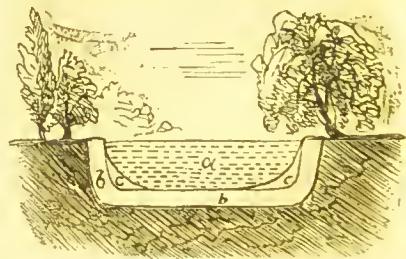
POLYANTHUS.—A variety of the common primrose. The characteristics of a fine polyanthus are, a short straight stem, the eye round, of a bright clear yellow, and distinct from the ground colour. The ground colour is most admired when shaded with a light and dark rich crimson, resembling velvet, with one mark or stripe in the centre of each division of the limb, bold and distinct, from the edging down to the eye, where it should terminate in a fine point. The pips should be large, quite flat, and perfectly round. The edging should resemble a bright gold lace, and be so nearly of the same colour as the eye and the stripes as to be scarcely distinguished. The polyanthus may be propagated by dividing the root, or by slips, for ordinary purposes; and by seed, for obtaining new varieties. The plants from which the seed is to be saved are to be separated from the stems. When ripe, it should be cut off with part of the stem, and so preserved till the sowing season. For the mode of culture, see AURICULA.

POMADE.—In the preparation of pomades, one of the first objects of consideration is to obtain their fatty basis in as fresh and pure a state as possible. Lard, beef and mutton suet, beef marrow, veal fat, and bear's fat, are the substances commonly employed for this purpose, either singly, or in mixtures of two or more of them. The fat, after being separated from extraneous skin and fibre, is pounded in a marble mortar, in the cold, until all the membranes are completely torn asunder. It is next placed in a covered porcelain or polished metal pan, and submitted to the heat of a water bath, which is continued until its fatty portion has liquefied, and the albuminous and aqueous matter, and other foreign substances have completely separated and subsided. The liquid fat is then carefully skimmed, and at once passed through a clean flannel filter. In this state it is perfumed as desired; after which, when it is intended that the pomade should be opaque and white, it is assiduously stirred

or beaten with a glass or wooden knife, or spatula, until it concretes; but when it is desired that it should appear transparent or crystalline, it is allowed to cool very slowly, and without being disturbed. To prevent the accession of rancidity, a little benzoic acid, gum benzoin, or nitric ether, may be added to the fat, whilst in the liquid state. The following recipes are given for various kinds of pomades. 1. *Plain pomade*—Lard, two pounds; beef suet, one pound; carefully rendered as above. 2. *Scented pomade*—Plain pomade, one pound; melt it by the least possible degree of heat; add of essence of lemon or essence of bergamot, three drachms, and stir the mixture until it concretes. 3. *Crystallized pomade*—Castor oil, one pound; spermaceti, three ounces; melt them together by a gentle heat; add of essence of bergamot, three drachms; oils of verbena, lavender, and rosemary, of each half a drachm; pour it into wide-mouthed glass bottles, and allow it to cool very slowly and undisturbed. 4. *Pomade divine*—Beef marrow, two pounds, washed and purified; liquid styrax, cypress-wood, and orris-root, of each two ounces; powdered cinnamon, one ounce; cloves and nutmegs, of each (bruised) half an ounce; digest the whole well together by the heat of a water-bath for six hours, and then strain through flannel.

POMEGRANATE, CULTURE OF.—In propagating this fruit, the single flowering sorts may be raised from seed, and all the varieties by cuttings, suckers, or layers, or by inoculation or grafting on the wild sort. The last is considered much the best mode when fruit is the object, and the next best is by layers; but the common mode is by suckers, which these plants send up abundantly. The directions given for raising and cultivating the orange-tree may be considered as equally applicable to the pomegranate.—See ORANGE.

POUND.—A reservoir of water dug out of the soil, and made retentive by puddling with clay the bottom and sides. After the excavation has been cleared out, a layer of clay, well tempered with a little water, is laid over the whole of the bottom and



trodden down till it forms a compact body about a foot thick. Upon this, spread a layer of quicklime an inch or upwards in depth. Over this put another layer of clay similar to the last, and trodden down in the same manner. To prevent the clay being injured by the treading of cattle, the whole

is covered with a layer of coarse gravel or small stones, of a considerable thickness. The sides of the pond may slope rapidly, or the reverse. If the slope be considerable, plants can be more easily fixed and cultivated. The engraving shows the section of a pond thus formed: *a* indicates the surface of the ground at the edge of the water; *b*, the puddle; *c*, the puddle to preserve the facing from injury. When a small pond of this kind is to be made, and the extent of the surface is determined upon and marked out, it will then be necessary to form a second or outer mark indicating the space required for the wall or the side puddle.

PONY.—Ponies are chiefly used for children to ride, or for drawing the pony carriage. It is an extremely useful animal, and will do much more work day by day than the horse. There is a great difference in the size and breed of ponies, some being scarcely eleven hands high, while others reach nearly to fourteen hands. About thirteen hands is the best for all purposes; and ponies well and strongly made of this height will carry and draw great weights, and go long distances if not over-paced.

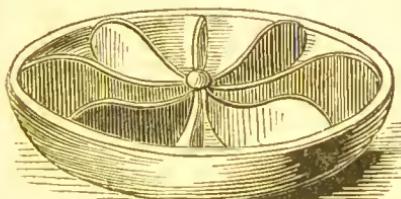
POPE, FOR ANGLING.—See MILLER'S THUME.

POPE JOAN.—A game played by a number of persons, who generally use a board painted for this purpose, which may be purchased at most turner's or toy shops. To play this game, the eight of diamonds must first be taken from the pack, and after settling the deal, shuffling, &c., the dealer dresses the board by putting fish counters, or other stakes, one each to ace, king, queen, knave, and game; two to matrimony, two to intrigue, and six to the nine of diamonds,

card dealt to each player; unless the game be determined by pope being turned up, the eldest-hand must begin by playing out as many cards as possible; first the stops, then pope, if he have it, and afterwards the lowest card of his longest suit, particularly an ace, for that can never be led through; the other players are to follow when they can, in sequence of the same suit, till a stop occurs; and the party having the stop thereby becomes eldest-hand, and is to lead accordingly, and so on, until some person parts with all his cards, by which he wins the pool, and becomes entitled besides to a stake for every card not played by the others, except from any one holding pope, which excuses him from playing; but if pope has been played, then the party having held it is not excused. King and queen are denominated matrimony; queen and knave make intrigue, when on the same hand; but neither these, nor ace, king, queen, knave, nor pope, entitle the holder to the stakes deposited thereon, unless played out; and no claim can be allowed after the board be dressed for the succeeding deal; but, in all such cases, the stakes are to remain for future determination. This game only requires a little attention to remember what stops have been made in the course of the play: as, for instance, if a player begin by laying down the eight of clubs, then the seven in another hand forms a stop, whenever that suit be led from any lower card; or the holder, when eldest, may safely lay it down in order to clear his hand.

POPLAR.—Most species of poplar are very ornamental, more especially in early spring, when the catkins of the males are produced. Their favourite place of growth is in moist soil, near a running stream: but they do not thrive in very marshy situations. All the species are readily increased by cuttings or layers, and some by suckers. As an ornamental tree, it ought to be grouped and massed with trees of equally rapid growth, else it soon becomes disproportionate and out of keeping with those the progress of which is comparatively slow. No tree requires less pruning; even the shortening of its branches is rarely needed, and large limbs ought never to be amputated, as the wounds readily imbibe the wet, and soon communicate a taint and rot to the trunk of the tree. The wood is very white, and when dry, of a tough nature, allowing nails to be driven into it without splitting, on which account, and its lightness, it is well adapted for packing cases; it also affords excellent and durable deals for flooring-boards, barn-doors, &c., and by musical instrument makers is often substituted for the wood of the lime tree.

POPPY.—A well-known plant found growing wild in various situations, especially in corn-fields. It is sometimes cultivated for the narcotic properties which it contains; in such a case the seeds are sown in March or April where they are to remain: they may also be propagated by division of the roots; they prefer a rich, light, sandy soil.



styled pope. This dressing is sometimes at the individual expense of the dealer, whilst at others, the players contribute two stakes each towards the same. The cards must next be dealt round equally to every player, one turned up for trump, and about six or eight left in the stock to form stops; as, for example, if the ten of spades be turned up, the nine consequently becomes a stop; the four kings, and the seven of diamonds, are always fixed stops, and the dealer is the only person permitted, in the course of the game, to refer occasionally to the stock for information which other cards are stops in their respective deals. If either ace, king, queen, or knave happen to be turned up trump, the dealer may take whatever is deposited on that head; but when pope is turned up, the dealer is entitled both to that and the game, besides a stake for every

POPPIES, SYRUP OF.—Take of poppy heads, without the seeds, fourteen ounces, boiling water, two gallons and a half; boil to one-half; press out the liquor with a strong pressure, boil again to two pints, strain while hot; boil again to one pint, and dissolve in it two pounds of loaf sugar.

PORK CHOPS.—Cut the chops about a third of an inch thick, trim them neatly and beat them flat. Put a piece of butter into the fryingpan, and as soon as it is hot, lay in the chops, turn them frequently, and they will be well browned in a quarter of an hour. Take one upon a plate and try it; if done, season it with a little finely minced onion, powdered sage, pepper and salt. Or prepare some sweet herbs, sage and onion chopped fine, and put all into a stewpan with a bit of butter. Give them one fry, beat two eggs on a plate with a little salt, and the minced herbs, and mix it all thoroughly together. Dip the chops in, one at a time, then cover them with bread crumbs and fry them in hot lard or dripping, till they are of a light brown.

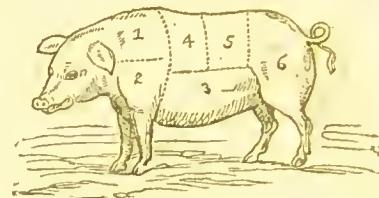
PORK, DIETETIC PROPERTIES OF.—The flesh of the hog is generally considered the most indigestible of animal food. The average time required for digestion is above five hours. Pork is particularly unwholesome in hot weather, for its indigestible properties make too great a demand upon the system during summer, and induce languor, while, at the same time, the blood becomes heated by the use of such strong food.

PORK, GRISKIN OF, TO DRESS.—As this joint is usually very hard, the best way is to cover it with cold water, and let it boil up. Then take it out, rub it over with butter, and set it before the fire in a Dutch oven; a few minutes will do it.

PORK HASHED.—Put two spoonfuls of chopped onions into a stewpan, with a wineglassful of vinegar, two cloves, a blade of mace, and a bay-leaf; reduce to half, take out the spice and bay-leaf, add half a pint of broth or water, cut some pork previously cooked into thin small slices, season well upon a dish with pepper and salt, stroke a good teaspoonful of flour over it, mix all together and put it into a stewpan; let it simmer gently for ten minutes, pour it out upon the dish, and serve with slices of gherkins in it; a little mustard may be added, if approved of. The remains of salt pork may be cut into large thin slices, and placed into a buttered frying-pan with a little broth, or merely fried in butter, and served with a purée of winter peas, made by boiling half a pint of peas until tender (tied up in a cloth); when done, put them into a stewpan with two ounces of butter; season with pepper and salt, add a gill of milk or cream, pour it into the dish, and dress the pork over. Pork may also be cut into thin slices and put into a soup plate with ketchup sauce over it; let it remain for half an hour; then butter the inside of a pudding basin, and lay a portion of cold peas pudding round it; place in the

pork, cover it with some of the pudding, put it into a sauceman with a little water to get hot; let it remain for about half an hour, then turn it out and serve.

PORK, JOINTS OF.—The various joints of the pig are known as follows; according to the accompanying engraving. 1. The spare



rib; 2. Hands; 3. Spring; 4. Fore loin; 5. Hind loin; 6. The leg. The most economical joint in pork is the leg, though all are much more solid than beef, and comparatively free from bone. Pork goes much further than any other meat, one reason for which is, that the fat does not melt away in boiling or roasting to the same extent.

PORK, LEG OF, BAKED.—Rub the leg over with salt and saltpetre mixed; let it lie for five or six days in the brine; then bang it up to smoke for five or six days. Take off the skin, put it into an earthen dish, and pour a little red wine over it; stick a few cloves in it, or beat them to powder, and rub them over it. When it has been in the oven a short time, take some hard biscuit pounded with sugar, and spread it all over. Serve it with gravy and port wine sauce.

PORK, LEG OF, BOILED.—Salt the joint for eight or ten days, turning it daily, but do not rub it after the first day. When it is to be dressed, weigh it; let it lie for half an hour in cold water to render it white; allow a quarter of an hour for every pound, and half an hour over from the time it boils up; skim it as soon as it boils, and frequently afterwards, but do not boil it fast or it will be hard.

PORK, LEG OF, TO ROAST.—Choose a small leg of fine young pork; cut a slit in the knuckle with a sharp knife, and fill the space with sage and onion chopped, and a little pepper and salt. Score the skin in slices, but do not cut deeper than the outer rind. Set it down at first at some distance from the fire, but baste it frequently to prevent its scorching; then, when about three parts done, rub the skin rather freely with raw butter, after which, flour it lightly and put it close to the fire, to make the crackling crisp. Apple sauce should be served with it.

PORK, LOIN OF.—This is usually roasted in the ordinary way, an improvement on this mode, however, is the Portuguese fashion, as follows:—Cut the skin of the pork across with a sharp knife, at distances of half an inch; roast as usual. Cut two onions small, and put them into a dripping-pan with a pint of vinegar; baste well with this and serve hot.

PORK PIE.—Raise some boiled crust into a round or oval form, and have ready the trimmings and small pieces when the hog is killed. If these be not sufficient, take the meat of a sweet bone. Beat it well with a rolling-pin, season with pepper and salt, keep the fat and lean separate; put it in layers quite up to the top; lay on the lid, cut the edge smoothly round, and pinch it together. Bake it in a slow oven.

PORK SAUCE.—Take two ounces of green sage leaves, an ounce of lemon-peel thinly pared, an ounce of minced shalot, an ounce of salt, half a drachm of cayenne, and half a drachm of citric acid. Steep them for a fortnight in a pint of claret, shake it often, and let it stand for a day or two to settle. Decant the clear liquor and cork it up close. When wanted, mix a tablespoonful in a quarter of a pint of gravy or melted butter.

PORK SAUSAGES.—Chop fat and lean of pork together; season it with sage, pepper, and salt, and add a slight seasoning of allspice; with this half-fill hog's entrails which have been soaked and made extremely clean; or the meat may be kept in a very small pan closely covered, and rolled and dusted with a very little flour before it is fried; serve on mashed potatoes; put in a form plain, or browned with the salamander, or before the fire; they must be pricked with a fork before they are dressed or they will burst, unless very carefully fried.

PORK STEAKS.—Cut the steaks from a loin or neck, and of middling thickness; pepper and broil them, and keep them turning. When nearly done, sprinkle them with salt, rub a little butter over them, and serve immediately they are taken off the fire, a few at a time.

PORK, TO CARVE.—See MUTTON.

PORK, TO CHOOSE.—To judge of pork, pinch the lean; if young and good, it will easily part. If the rind is tough, thick, and cannot be easily impressed with the finger, it is old. A thin rind in general denotes a good quality. When fresh, the meat will be smooth and cool; if clammy, it is tainted. What is commonly known as measly pork is very unwholesome, and may be known by the fat being full of kernels, which, in good pork, is never the case.

PORRIDGE.—See OATMEAL.

PORT WINE.—This wine is universally esteemed as the most generous and invigorating of any foreign liquors, and there cannot be a doubt that it supplies a grateful stimulus to persons of a weak and delicate constitution. It should, however, be used moderately, and, as a general rule, the quantity per diem should not exceed a pint. When purchased in large quantities, this wine may be procured genuine, but when a person can only afford to buy it as it is required for immediate drinking, the chances of obtaining it unadulterated are very slender. The best plan is, to ascertain where port wine may be best obtained, and to procure it there, although the cost may be comparatively high.

PORTER, TO BREW.—Take a mixture of brown, amber, and pale malts, nearly in equal quantities, and then turn them into the mash-tub in the following order. Turn on the first liquor at a hundred and sixty-five degrees; mash over hops, and then coat the whole with dry malt: in one hour set the tap. Mix ten pounds of brown hops to the quarter of malt, half old and half new; boil the first, work briskly with the hops for three-quarters of an hour, and after putting into the copper a pound and a half of sugar, and a pound and a half of liquorice to the barrel, turn the whole into the coolers, rousing the wort all the time. Turn out the second liquor at a hundred and seventy-four degrees, and in an hour set tap again. This second wort having run off, turn on again at a hundred and forty-five degrees; mash for an hour, and let it stand for the same time; in the interval, boiling the second wort with the same hops for an hour. Turn these into the coolers as before, and let down into the tub at sixty-four degrees, mixing the yeast as it comes down. Cleanse the liquor the second day at eighty degrees, previously throwing in a mixture of flour and salt, and rousing thoroughly.

PORTMANTEAU.—A convenient receptacle for clothes, &c., usually employed by persons when travelling. By proper packing, they may be made to contain a large number of articles. They may be obtained at various prices, but it is always better to purchase one made of real leather; there is a cheaper kind manufactured of inferior material, and by no means calculated to resist damp and wet.

PORTRAIT.—When relatives and friends are removed from us by distance or by death, the possession of their portrait, forms some sort of compensation for their absence in their own proper person. At the present day, the rapidity with which photographic portraits are executed, together with the lowness of charge, renders them available to all classes of the community. When persons are about to have their portrait taken, they should, if they wish to secure the most perfect resemblance of themselves as they generally appear, sit to the artist without 'making themselves up' for the occasion; thus: a novel style of arranging the hair, divesting the face of whiskers, beard, or moustache, or making any other changes, will so palpably alter the general appearance of the individual, as to render recognition a task of some difficulty. All constrained attitudes and unmeaning expressions of the features should be also avoided. When accessories are introduced by way of accompaniment to the portrait, care should be taken that these are characteristic of the sitter's tastes and habits, and reasonable in themselves. Thus, placing a book in the hands of a person who is notoriously illiterate is an obvious solecism; as is also representing a female striking a guitar who does not know a note of music. Setting a person down before a table on which are placed four decanters of wine, a pyramid of pie apple, and several pounds of grapes, which appear to be intended for the solitar

individual's own especial enjoyment, borders on the extravagant and absurd; particularly if the person thus represented has pecuniary resources so limited, as to permit of his only partaking occasionally of malt liquors and spirits. When persons are having their portraits taken, it is a good plan to divert the mind by recurring to some agreeable incident in their past life, the thoughts of which will impart a pleasant and natural expression to the features.

PORTUGAL CAKES.—Mix into a pound of flour a pound of loaf sugar, beat and sifted, and rub it into a pound of butter, till it becomes thick, like grated white bread; then put into it a little rose water, a glass of white wine, and ten eggs; work these well with a whisk, and stir in half a pound of currants. Butter the tin pans, fill them half full, and bake them.

Flour, 1lb.; **sugar**, 1lb.; **butter**, 1lb.; **rose water**, 1 tablespoonful; **white wine**, 1 wineglassful; **eggs**, 10; **currants**, $\frac{1}{2}$ lb.

PORTUGAL WATER.—Orange-flower water, one pint; rose water, one pint; and myrtle water, half a pint; to these put a quarter of an ounce of distilled spirit of musk, and an ounce of spirit of ambergris. Shake the whole well together, and the process will be finished.

POSSET.—See **ALE**, **ALMOND**, **LEMON**, **ORANGE**, **TREACLE**, **WINE**, &c.

POSTAGE OF LETTERS, &c., RATES AND REGULATIONS OF.—The following are the rates of postage as relates to Great Britain. Letters not exceeding half an ounce in weight, one penny; one ounce, twopence; two ounces, fourpence; three ounces, sixpence; and so on, two rates being added for every ounce. Letters put unpaid into the letter boxes are charged with double the prepaid rates. All inland letters to pass unpaid by the post, may not exceed four ounces. All above that weight must be prepaid. In the event of any unpaid letter above the weight of four ounces being posted, it will be charged with double the prepaid rates of postage; if insufficiently paid, it will be charged with double the amount of the deficiency. A letter to pass by the post, either paid or unpaid, must not exceed the dimensions of twenty-four inches in length, breadth, width, or depth. Any packet above those dimensions, may, if fully paid, be detained and opened, or forwarded, at the option of the postmaster-general. All persons sending letters by the post unpaid, which, from any cause whatever, cannot be delivered to the parties to whom they are addressed, are liable to pay the postage charged thereon, which may be recovered with costs, by summary process before a magistrate. The regulations of the *book post* are as follows:—For a packet not exceeding four ounces, one penny; eight ounces, twopence; sixteen ounces, fourpence; one pound and a half, sixpence; and so on, twopence being charged for every additional half pound or any less weight. The postage must be prepaid in full by means of stamps. Every packet must be left open at the ends or sides. A book packet may contain any number of sepa-

rate books or other publications, prints or maps, which may be either printed, written, or plain, or any mixture of the three. Book-binding, rollers of prints, &c., markers, and anything else necessary for the safe transmission of the contents, may be sent by book-post. No written letter must be sent with the packet, but printed ones are allowed. Letters can be posted at the receiving houses in London, every evening (except Sunday) until half-past five; or by affixing an extra stamp, until six. At the head offices half an hour to an hour beyond this time is allowed. Non-commissioned officers, captains' and pursers' stewards, clerks-assistant, seamen, stokers, and soldiers, can send and receive letters to and from places abroad, and places in the China and India seas, while they are employed in Her Majesty's service, or in the service of the East India Company, for one penny. Letters addressed "Post Office, London," or "Poste Restante, London," are delivered only at the window of the General Post Office, St. Martins le Grand, between the hours of 10 and 4. Foreigners applying for letters must produce their passports. Foreign letters addressed above are retained for two months at the post office window. Inland letters, similarly addressed, are retained for one month; the letters are then sent to the Dead Letter Office. Over-charges on letters will be returned, if sent to the post-office by the letter-carrier of the district. The morning delivery of general post letters commences at about eight o'clock a.m., and is completed in about an hour, except on Mondays and on other days when there are large arrivals of foreign letters. The bulk of the letters by the day mails arrive at 11:30 a.m. The delivery is completed about two hours after the arrival of the mail. Newspapers, and other publications registered for transmission by post, must either be stamped or have a postage stamp affixed. They must be posted within fifteen days of publication. The packet must be open at both ends, and must not contain any enclosure. The rates of postage for foreign and colonial letters are too numerous and fluctuating to be detailed. Letters may be refused by the person to whom they are addressed, but the seal must not be broken. Any complaints of delay, irregularity, &c., must be laid before the Postmaster-General in writing. Missing letters may be inquired for at the Inquiry Office, General Post Office. A letter once posted cannot, on any account, be returned to the person posting it.

POTATO BALLS.—Mix some mashed potatoes with the yolk of an egg, roll the mass into balls, flour them, or sprinkle them with egg and bread crumbs, and fry them in clean dripping, or brown them in a Dutch oven.

POTATO BREAD.—Boil the potatoes not quite so soft as they are ordinarily boiled, then dry them a short time on the fire, peel them while hot, and pound them as fine as possible; next put a small quantity of pearl-flour to new yeast, while it is working briskly, add as much meal, ground rice, or flour, as can be worked in. Mix the whole well together, but do not add any water to it. After the

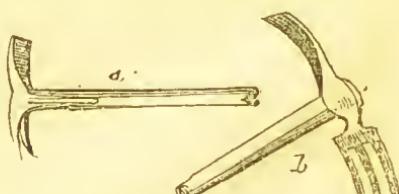
dough is thus prepared, let it stand for an hour and a half or two hours, before it is put into the oven. Observe, it will not require so long baking as regular flour bread.

POTATO, CULTURE OF.—The varieties of the potato are numerous. For forcing a first crop in the open ground, there are Broughton dwarf, early Warwick, ash-leaved kidney, Fox's seedlings, early manly, early mule, early kidney, early shaw, nonsuch, gold-finder. For main crops the varieties are ranged in this class, according to their forwardness in ripening:—early champion, ox noble, red-nose kidney, large kidney, hread-fruit, red-streak, blaek skin purple, red apple, rough red. A dry, friable, fresh, and moderately rich soil, is the best for every variety of the potato; and for the earliest crop, it may be with advantage more silicious than for the main one. The back-skui and rough red thrive better than any in moist or cold strong soils. If manure is necessary, whatever be the nature of the one employed, it is better spread regularly over the surface previous to digging, rather than put into holes with the sets, or spread in the trench when they are so planted. Stable-dung is, perhaps, the best of all factitious manures; sea-weed is a very beneficial addition to the soil, as is salt. Coal-ashes and sea-sand are applied with great benefit to retentive soils; but calcareous matter should never be used. The situation must always be open. It is propagated in general from cuttings of the tubers, though the shoots arising from thence and the layers of the stalks may be employed. New varieties are raised from seed. Planting in the open ground is best done in October and November, and may thenceforward be continued until the end of March. This last month is the latest in which any considerable plantation should be made. They will succeed if planted in May, or even June; yet it ought always to be kept in mind that the earliest planted, especially in dry soils, produce the finest, healthiest, and most abundant crops. The next point for consideration is the preparation of the sets. Some gardeners recommend the largest potatoes to be planted whole; others that they be sliced into pieces containing two or three eyes; a third set, to cut the large tubers directly in half; a fourth, the employment of the shoots only, which are thrown out if potatoes are kept in a warm damp situation; and a fifth, that merely the parings be employed. Cuttings of the stalks, five or six inches in length, or rooted suckers will be productive if planted in showery weather, in May or June; and during this last month, or early in July, the potato may be propagated by layers, which are formed by pegging down the young stalks when about twelve inches long, they being covered three inches thick with mould at a joint. For the main crops, moderate sized whole potatoes are the best. To obtain early crops, where tubers are rapidly formed, large sets must be employed. In these, one or two eyes at most should be allowed to remain. If the sets are placed with their leading ends upwards, few and very strong early stems will be produced; but, if the position be

reversed, many weak and later shoots will arise; and not only the earliness, but the quality of the produce is depreciated. For the earliest crops, there are likewise several modes of assisting the forward vegetation of the sets. These should be prepared by removing every eye but one or two; and being placed in layers in a warm room, where air and light can be freely admitted, with a covering of straw, chaff, or sand, they soon emit shoots, which must be strengthened by exposure to the air and light as much as possible, by taking off the cover without injuring them. During cold weather, and at night, it must always be removed; the leaves soon become green and tolerably hardy. In early spring, they are planted out, the leaves being just left above the surface, and a covering of litter being applied every night until the danger of the frost is passed. Planting should be performed by the aid of the dibble, in rows; for the early crops, twelve inches apart each way, and for the main ones eighteen inches. A small round



willow basket with a bow-handle should be provided for every person who is to plant the sets; and as a considerable number of hands are required for the operation, boys and girls may find employment at it, over and above the ordinary field-workers. The potato-dibble is the best instrument that can be employed, the earth being afterwards raked or struck in with the spade, and the soil not trampled upon, but planted, as sufficient is dug for receiving a row; for the lower the soil the less does frost penetrate. The best kind of implements for this purpose are those shown in the engraving; a is called the Guernsey prong, is light and



easy; it requires no stooping, and will tear up the deepest-rooted weeds. A somewhat similar implement is illustrated at b, which may be used upon strong stubborn soil, with great economy of time and advantage to the land.

As soon as the plants appear they should be well weeded, and kept free from weeds throughout their growth. The very earliest crops will be in production in June, or perhaps towards the end of May, and may thence be taken up as wanted until October, at the close of which month, or during November, they may be entirely dug up and stored. The tubers should be sorted at the time of taking them up; for, as the largest keep the best, they alone should be stored, whilst the smaller ones are first made use of. A variety of the potato is generally considered to continue about fourteen years in perfection, after which period it gradually loses its good qualities, becoming of inferior flavour and unproductive; fresh varieties, therefore, must be occasionally raised from seed. The berries or apples of the old stock having hung in a warm room throughout the winter, the seed must be obtained from them by washing away the pulp during February. The seed is then thoroughly dried and kept till April, when it is sown in drills about a quarter of an inch deep and six inches apart, in a rich light soil. The plants are weeded, and earth drawn up to their stems, when an inch in height; and as soon as the height has increased to three inches they are moved to a similar soil in rows, sixteen inches apart each way. Being finally taken up in the course of October, they must be preserved until the following spring, to be then replanted and treated as for store crops. The tubers of every seedling should be kept separate, as scarcely two will be of a similar habit and quality, whilst many will be comparatively worthless, and but few of particular excellence. If the seed is obtained from a red potato, that flowered in the neighbourhood of a white tubered variety, the seedlings will, in all probability, resemble both their parents; but an exact resemblance to the original stock is seldom met with. The early varieties—if planted on little heaps of earth, with a stake in the middle, and when the plants are about four inches high, being secured to the stakes with shreds and nails, and the earth washed from the bases of the stems by means of a strong current of water, so that the fibrous roots only enter the soil—will blossom and perfect seed. The season of forcing the potato is from the close of December to the middle of February, in a hot-bed, and at the close of this last month on a warm border, with the temporary shelter of a frame. The hotbed is only required to produce a moderate heat. The earth should be six inches deep, and the sets planted in rows six or eight inches apart, as the tubers are not required to be large. The temperature ought never to sink below sixty-five degrees, nor rise above eighty. If the tubers are desired to be brought to maturity as speedily as possible, instead of being planted in the earth of the bed, each set should be placed in a pot about six inches in diameter. Young potatoes may be obtained in the winter, according to the following plan, without forcing:—Plant some late kinds, unsprouted, in a dry, rich border, in July, and again in August, in rows two feet apart. They will produce new

potatoes in October, and in succession until April, if covered with leaves or straw, to exclude frost. If old potatoes are placed in dry earth, in a shed, during August, they will emit young tubers in December.

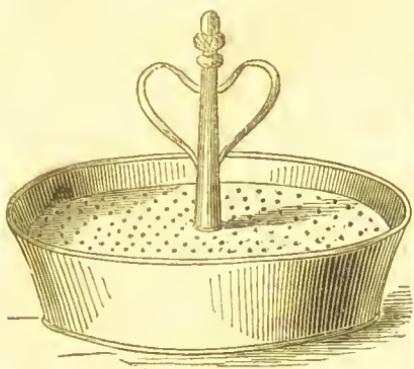
POTATO DUMPLINGS.—Peel some potatoes and grate them into a basin of water; let the pulp remain in the water for a couple of hours; drain it off, and mix with it half its weight of flour; season with pepper, salt, chopped onion, and sweet herbs. If not moist enough, add a little water. Roll into dumplings the size of a large apple, sprinkle them well with flour, and throw them into boiling water. When you observe them rising to the top of the saucepan, they will be boiled enough.

POTATO FRITTERS.—Boil and beat half a dozen potatoes, mix with four beaten eggs, about a gill of cream, some salt and nutmeg, a little sugar, some fresh butter oiled, and a tablespoonful of spirit; beat well together, drop in the boiling dripping, fry a light brown, dish hot, and strew sugar over them.

POTATO JELLY.—Take two or three large potatoes, wash, peel, and grate them; stir the pulp, thence procured, in a jug of water. Pass the mixture of pulp and water through a sieve, and collect the water which passes through into a basin. Let this stand for a few minutes, and a sufficient quantity of starch will have fallen for the purpose required. Pour off the water, and continue stirring up the starch at the bottom of the basin, while boiling water is being poured upon it; and it will soon and suddenly pass into a state of jelly. The only nicely required is to be careful that the water is absolutely boiling, otherwise the change will not take place. It does not require more than eight minutes to transform a raw potato into a handful of most excellent jelly, which may be seasoned with sugar, spice, and wine to taste.

POTATO PASTY.—For making this dish, a tin mould must be employed, of the construction shown in the engraving, with a perforated moveable top, and a small valve, to allow the escape of steam. Arrange at the bottom of the mould from two to three pounds of mutton cutlets, freed according to the taste, from all, or from the greater portion of the fat, then washed, lightly dredged on both sides with flour, and seasoned with salt and pepper, or cayenne. Pour to them sufficient broth or water to make the gravy, and add to it at pleasure a tablespoonful of ketchup or other sauce. Have ready boiled, and very smoothly mashed, with about an ounce of butter, and a spoonful or two of milk and cream to each pound, as many good potatoes as will form a crust to the pastry of quite three inches thick; put the cover on the mould and arrange these equally upon it, leaving them a little rough on the surface. Bake the pastry in a moderate oven from three-quarters of an hour to an hour and a quarter, according to its size and contents. Pin a folded napkin neatly around the mould, before it is served, and have ready a hot dish to receive the cover, which must not be lifted off until after the pastry is on

the table. For a pasty of moderate size, two pounds or two and a half of meat, and from three to four of potatoes, will be sufficient.



cient; a quarter of a pint of milk or cream, two small teaspoonfuls of salt, and from one to two ounces of butter must be mixed up with these last.

POTATO PUDDING.—With a pound and a quarter of fine mealy potatoes, hoiled very dry, and mashed perfectly smooth while hot, mix three ounces of hutter, five or six of sugar, five eggs, a few grains of salt, and the grated rind of a lemon. Pour the mixture into a well-buttered dish, and bake it in a moderate oven for nearly three-quarters of an hour. Serve with sugar sifted over it.

Potatoes, 1½lb.; butter, 3ozs.; sugar, 5 or 6ozs.; eggs, 5; lemon-rind, 1; salt, a few grains.

POTATO ROLLS.—Boil three pounds of potatoes, bruise and work them with two ounces of hutter, and as much milk as will make them pass through a cullender. Take three-quarters of a pint of yeast, and half a pint of warm water; mix these with the potatoes, pour the whole upon five pounds of flour, and add three teaspoonfuls of salt. Knead it well: if not of a proper consistency, add a little more warm milk and water. Let it stand before the fire an hour, to rise; then work it well, and make it into rolls. Bake them about half an hour in a moderate oven. These rolls will cut well, toasted and buttered.

Potatoes, 3lbs.; butter, 2ozs.; milk, sufficient; yeast, ¼-pint; warm water, ½-pint; flour, 5lbs.; salt, 3 teaspoonfuls.

POTATO SOUP.—Cut a pound and a half of gravy beef into thin slices, chop a pound of potatoes and a large onion, and put them into a saucepan with three quarts of water, half a pint of gray peas, and two ounces of rice. Stew these till the gravy is quite drawn from the meat, strain it off, take out the beef, and pulp the other ingredients through a coarse sieve. Add the pulp to the soup, cut in two or three roots of celery; simmer in a clean saucepan till this is tender, season with pepper and salt, and serve up with fried bread.

Gravy beef, 1½lb.; potatoes, 1lb.; onion, 1; water, 3 quarts; gray peas, ½-pint; rice, 2ozs.; celery, 2 or 3 roots; pepper and salt, to season.

POTATOES BAKED.—The potatoes employed for baking should be of a large size. They are merely washed, and put into a slow oven for about half an hour, or longer, according to their size, and are served with hutter, pepper, and salt.

POTATOES BOILED.—Fill a saucepan half-full of potatoes of an equal size, washed but not pared; add as much cold water as will cover them about an inch. Set them on a moderate fire, let them boil very gently, and when it is found, by the application of a fork, that they are beginning to get soft, strain off the water, strew a little salt over them, and let them stand on the fire uncovered for about two minutes; then cover them, and set them by the side of the fire, to keep hot.

POTATOES BROILED.—Parboil potatoes, then slice them, and put them on a gridiron over a clear fire, and turn them frequently till they are of a nice brown colour on both sides; serve them hot.

POTATOES CRISPED.—Wash well, and wipe, some potatoes of good flavour; cut them up into slices from half an inch to an inch thick, free them from the skins, and pare the potatoes round and round in very thin and very long ribbons. Lay them into a pan of cold water, and half an hour before they are wanted for table, lift them on to a sieve, that they may be well drained. Fry them in good butter, which should be very hot when they are thrown in, until they are quite crisp, and lightly browned; drain and dry them on a soft cloth, pile them in a hot dish, strew over them a mixed seasoning of salt and cayenne in fine powder, and serve them without delay. Five or six minutes will fry them.

POTATOES FRIED.—If the potatoes are whole, first boil them nearly enough, and then put them into a stewpan with a bit of butter, or some beef dripping. To prevent them burning, shake them about till they are brown and crisp, and then drain them from the fat. To fry cold potatoes, put a piece of dripping into a frying-pan; when melted, slice in the potatoes with a little pepper and salt; set them on the fire, and continue stirring them. When quite hot, they are ready to serve.

POTATOES MASHED.—Boil them till they are perfectly tender, pour off the water, and steam them very dry; peel them quickly, take out every speck, and while they are still hot, press them through an earthen cullender, or bruise them to a smooth mash with a strong wooden fork or spoon. Melt in a clean saucepan a slice of butter with a few spoonfuls of milk, or better still, of cream; put in the potatoes, after having sprinkled some fine salt upon them, and stir the whole over a gentle fire with a wooden spoon, until the ingredients are well mixed, and the whole is very hot. It may then be served immediately, or heaped in a dish, left rough on the surface, and browned before the fire; or it may be pressed into a

well-buttered mould, which has been strewn with the finest bread crumbs, and shaken free from the loose ones, then turned out, and browned in a Dutch or an ordinary oven.

POTATOES SCALLOPED. — Having boiled and mashed the potatoes, butter some clean scallop shells or patty-pans, and put in the potatoes. Smooth them on the top, cross a knife over them, strew on a few fine bread crumbs, sprinkle them a little with melted butter from a paste brush, and then set them in a Dutch oven. When they are browned on the top, take them carefully out of the shells, and brown the other side.

POTATOES, to PRESERVE. — To preserve potatoes from frost, lay them up in a dry store room, and cover them with straw or a linen cloth. If this be not convenient, dig a trench three or four feet deep, and put the potatoes in as they are taken from the ground; cover them with the earth taken out of the trench, raise it up in the middle, like the roof of a house, and cover it with straw, so as to carry off the rain. A still better protection is afforded, if the potatoes are laid above ground, and covered with a sufficient quantity of mould to protect them from the frost, as, in this case, they are less likely to be injured by the wet. Potatoes may also be preserved by suffering them to remain in the ground, and digging them up in the spring of the year as they are wanted.

POTATOES WITH CREAM. — Flour well a piece of butter, and put it into a stewpan, with a little salt and pepper; mix them well together, add a glass of cream; stir the sauce till it boils; then cut into slices some potatoes previously boiled; put them into the sauce; and when warmed up, serve hot.

POTATOES WITH MUSHROOMS. — Boil some potatoes in salt and water; when done, cut them into slices, and put them into a stewpan, with some mushrooms and shalots shred fine, and a large slice of butter; let them stand a few minutes on the fire; add a little flour moistened with some good stock, and a seasoning of pepper and salt; let the whole stew together for about a quarter of an hour, then add the yolks of two eggs, and a little white wine vinegar.

POTICHOMANIE. — An exceedingly pleasing and interesting art, suitable to be practised by ladies. It is very simple, requires no previous knowledge, and yet affords abundant scope for the exercise of the most exquisite taste. The following articles are necessary to be procured in practising the art of potichomanie:—Glass vases of shapes suitable to the different orders of Chinese, Japanese, Etrusean, and French porcelain, allumettes, &c.; cups, plates, &c., &c. of Sèvres and Dresden design. Sheets of coloured drawings, or prints, characteristic representations of the designs or decorations adapted to every kind of porcelain and china. A bottle of liquid gum. Three or four hog's-hair brushes. A bottle of varnish. Very fine pointed scissors for cutting out. An assortment of colours for the foundation, in bottles. A packet of gold powder. A glass vessel for diluting the colours. In order to make the directions

more plain, let it be supposed that the object selected for imitation is a Chinese vase. After providing yourself with a plain glass vase, of the proper shape, you take your sheets of coloured prints, on which are depicted subjects characteristic of that peculiar style. From these sheets can be selected a great variety of designs, of the most varied character, on the arrangement and grouping of which you will exercise your own taste. After you have fully decided upon the arrangement of your drawings, cut them out accurately with a pair of scissors, then apply some liquid gum carefully over the coloured side of the drawings, and stick them on the inside of the vase, according to your own previous arrangement, pressing them down till they adhere closely without any bubbles of air appearing between the glass and the drawings. When the drawings have had sufficient time to dry, take a fine brush, and cover every part of them (without touching the glass) with a coat of parliment size or liquid gum, which prevents the oil colour (which is next applied) from sinking into or becoming absorbed by the paper. When the interior of the vase is perfectly dry, and any particles of gum size that may have been left on the glass have been removed, your vase is ready for the final and most important process. You have now to tint the whole of the vase with a proper colour, to give it the appearance of porcelain; for, up to this time, you will recollect it is but a glass vase, with a few coloured prints stuck thereon. Select from your stock of prepared colours, in bottles, the tint most appropriate to the kind of china you are imitating (as it is a china vase which is supposed to be making, it will be of a greenish hue); mix fully sufficient colour in a glass vessel, then pour the whole into the vase. Take now your vase in both hands, and turn it round continually in the same direction, until the colour is equally spread over the whole of the interior; when this is satisfactorily accomplished, pour back the remainder. If the prepared colour be too thick, add a little varnish to the mixture before applying it. If preferred, the colour may be laid on with a soft brush. Should the vase be intended to hold water, the interior must be well varnished after the above operations, or lined with zinc or tin-foil. If the potichomanist wishes to decorate the mouth of the vase with a golden border, he can do so by mixing some gold powder in a few drops of the essence of lavender and some varnish, applying it on the vase with a fine brush; or he can purchase gold bands, already prepared for application, in varied sheets, suitable to the potichomanie designs. Potichomanists have found the art capable of greater results than the mere imitation of porcelain vases, by the introduction of glass panels (previously decorated with choice flowers on a white ground) into drawing-room doors, and also into walls, which, being panel-papered, offer opportunities of introducing centre-pieces of the same character as the doors; elegant chess and work tables, folding and cheval screens, panels

for cabinets, cheffoniers, and book-cases, slabs for pier and console tables, glove-boxes, covers for books, music, albums, &c. The cost of the articles employed is not very great. Glass vases of various shapes may be procured from 9d. each; sheets of coloured designs, from 1s. each; prepared colours (ready for use) of every tint required by the potichomanist, 1s. per bottle; bottles of varnish, 1s. each; bottles of prepared gum, 6d., 9d., and 1s. each; bottles of gold paint, 1s. 6d. each; brushes (hog and camel-hair), from 1d. each.

POT POURRI.—A mixture of odorous flowers, roots, gums, &c., varied according to the taste of the operator, either mixed together dry, or in the fresh state preserved with salt. The usual way of making it is, to collect roses, lavender, and other sweet-scented flowers, as they blow; to put them into a large jar mixed with salt, until a sufficient quantity has been collected; then to add to these such other odorous substances as may be required to form an agreeable perfume.

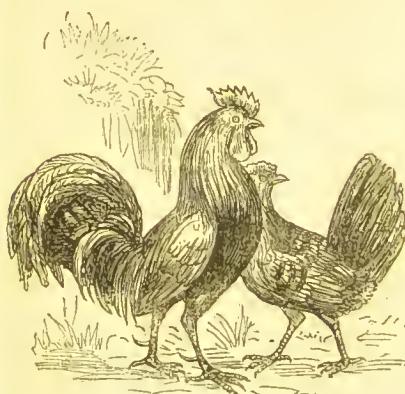
POTTED MEATS, &c. — See BEEF, BLOATERS, GROUSE, HAM, HARE, LOBSTER, MUTTON, SALMON, VEAL, &c.

POTTING.—In gardening, an operation performed as follows:—Having the pots and mould ready for the reception of the intended plants, observe, previous to planting them, to place some pieces of tile, oyster-shells, potsherds, or gravel over the hole at the bottom of the pot, both to prevent the hole from being clogged and stopped up with the earth, and the earth from being washed out with occasional watering; and also to prevent the roots of the plants from getting out. Having secured the holes, place some earth in the bottom of each pot, from two or three, to five or six inches or more in depth, according to the size of the pot and the roots of the plant. This done, insert the plant in the middle of the pot, upon the earth, in an upright position; if without a ball of earth, spread its roots equally every way, and directly add a quantity of fine mould about all the roots and fibres, shaking the pot, to cause the mould to settle firmly about them; at the same time, if the roots stand too low, shake it gently up as occasion demands: having filled the pot with earth, press it gently all round with the hand, to settle it moderately firm in every part, and to steady the upright posture of the plant, raising the earth, however, within about half an inch or less of the top of the pot. It will soon settle lower, and thereby leave a void space at top, which must receive occasional watering. As soon as the plant is thus potted, give directly a moderate watering, to settle the earth more closely about all the roots, and promote their shooting into the new earth, repeating the waterings as occasion requires. Transplanting potted plants from one pot to another is called shifting, and is performed with the whole ball of earth contained in the pot entire, so as to preserve the plants in a growing state. The method of removing plants out of their pots with balls is in general easily effected. Some-

times in small plants it is performed by turning the pot upside down, and sticking the edge against the side of a bench, or edge of the boards of a wheel-barrow, or the like, when the ball comes out entire; or occasionally, a plant that is very well rooted, and the numerous fibres of which surround the outside of the ball, will readily quit the pot when drawn by the stem. But if, by either of the above methods the ball will not readily quit the pot, thrust a narrow thin slip of wood down all round the pot, when the ball will come out, by the process of striking the edge of the pot, with the greatest facility. In replanting in larger pots, the first step regards the management of the numerous fibres which surround the outside ball. When these are not numerous, the general practice is to leave them untouched; but when they are so abundant as to form a sort of matted coat, the practice is to trim the greater part of them off close to the ball, both on the sides and bottom, together with some of the outward old earth of the ball; then, having the pots of proper sizes, larger than the former ones, and having secured the holes at the bottom, and put in some fresh compost, deposit the plant with its entire ball in the pot, taking care that it stands in the centre, erect, and of the same depth as before. Then fill up all the interstices round the ball with fresh mould, pressing it down, and ramming it down the sides with a broad stick, adding more mould gradually, and raising it so as to cover the old ball; finish with a moderate watering, to settle the new earth close in every part. In potting plants from the open ground, or beds of earth or dung, or otherwise, if they have been previously pricked out at certain distances, and have stood long enough to fix their roots firmly, they may be moved into pots with balls, by the proper use of the trowel transplanter, or hollow spade. Seedlings, however, cannot often be raised with balls, and are therefore planted in the smallest sized pots first, and gradually removed into larger ones with their balls entire. Plants in pots are seldom shifted directly from small into large pots, but generally into a size only one gradation larger than that in which they were. In large pots the roots are apt to be chilled and rotted, by the retention of more water than they require.

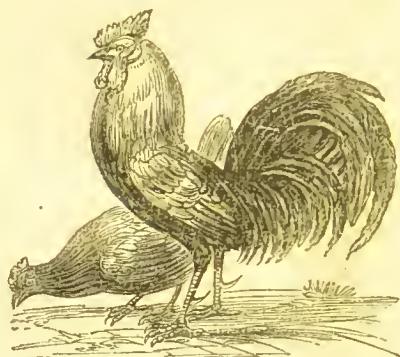
POULTICE.—An external application generally extemporaneous, used to promote suppuration, allay pain and inflammation, resolve tumours, &c. Poultices are generally prepared with substances capable of absorbing much water, and assuming a pulpy consistence, so as to admit of their application to any surface, however irregular. Their curative action principally depends upon the liquids with which they are moistened, and the heat retained by the mass. With this object they should never be heavy, or very bulky, and should be frequently repeated, and lightly but securely bandaged on, to prevent displacement. The addition of a little lard, olive oil, or glycerine to a poultice, tends greatly to promote its emollient action, and to retard its hardening.—See LINSEED, MUSTARD, &c.

POULTRY.—A general term, including every kind of domestic fowl which is reared about the house or farm-yard. For the production of abundance of eggs, poultry must be well fed, and warmly lodged. The hen-roosts and poultry-house should be securely protected from the weather, and their temperature duly maintained by proximity to the stables, cow-houses, or dwelling-house, and, in cold weather, by the employment, when necessary, of artificial heat. The food should also contain an ample supply of nitrogenous matter, for without this how can it be expected that hens can produce abundance of eggs, which are peculiarly rich in nitrogen? The greaves sold by tallow-chandlers, and such like substances, are hence excellent additions to the ordinary food of poultry. Poultry should also have abundance of space for exercise and recreation. This space should, if possible, contain living plants of various kinds, and some gravelly or sandy soil; because worms, snails, as well as occasionally grass and herbage, form a part of the food of poultry; and sand or gravel is swallowed by them for the purpose of promoting digestion. The domestic fowl, or common cock and hen, repay the keeper best for his trouble and outlay. The Dorkings (*fig. 1*) are considered a first-class breed. They are good layers, but sit

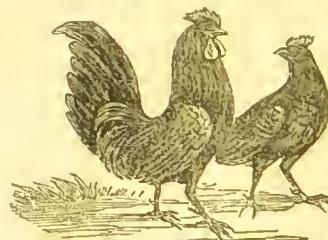
Fig. 1.

steadily, and are excellent mothers for chicks of an equally robust nature with themselves, but are too clumsy and heavy to nurse the more delicate breeds. They are to be ranked among the largest fowls, and are esteemed among the best in point of quality of flesh. This species, however, appears to bear breeding in-and-in worse than any other variety. It is considered desirable to change the cock of the walk every year, or every two or three years at the longest, if the stock of Dorkings is to be kept up in perfection. The game fowls (*fig. 2*) are an extremely valuable tribe, both on account of their beauty, and their usefulness. They are the most exemplary incubators we have, and during the season are often made to sit nine and eleven weeks

at a stretch. They are excellent mothers when the permission is granted them to lead out a brood, and also early in showing a desire to sit; so that whether for ducklings, chickpeas, pheasants and partridges, or still rarer birds, game hens are the most to be depended on as foster-mothers. Both their flesh and their eggs are first-rate quality for table, though neither attain the bulk of some other breeds. The silver-pencilled, golden-pencilled, and spangled

Fig. 2.

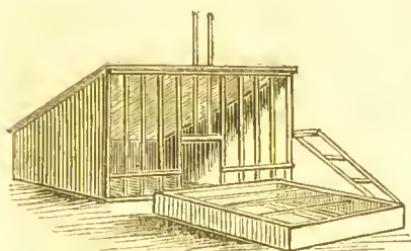
Hamburgs are the most prolific layers we have; they are as good table fowls in quality and fineness of flesh as the Dorkings, and come quite as early to maturity. The Polish fowls are best suited for the purposes of the fancier. The chicks are a long time advancing in growth, and the full-grown birds are not in their prime till the third year, at the soonest. They lay a goodly number of medium-sized eggs, and are slow to sit. Their flesh is excellent. Bantams (*fig. 3*) are old-established pets of poultry fanciers; they maintain their ground in public favour from their neat and pleasing appearance,

Fig. 3.

the number of their eggs, their usefulness as nurses, the great service they render as destroyers of grubs and insects, and the small extent of accommodation needful for them. It now remains to mention a few points requisite for the successful keeping of poultry. In the first place, the fowl-house must be warm, and yet airy and well ventilated. The floor must be paved with some hard material, so as to allow the dung

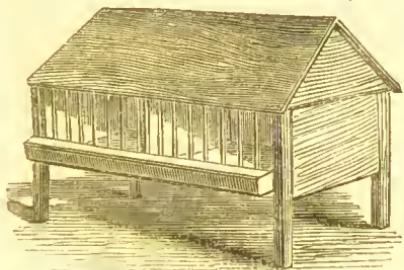
to be scraped clean away, and the house then strewed with fresh sand, or earth, or ashes, which should be performed daily, if possible. Three or four times a year, the whole interior of the building, with its fixtures, nests, perches, floor, &c., must be thoroughly whitewashed; if with two coats, so much the better, to insure the destruction of insect vermin. A hen-ladder is an indispensable piece of furniture, to prevent the fowls hurting themselves in their attempts to go to roost. The nest should not be larger than will comfortably accommodate a single hen. A most convenient nursing coop is shown in fig. 4, which may be made

Fig. 4.



of any dimensions suitable for fowls, ducks, or turkeys. The moveable bars show the place where the mother bird is made to enter; the chicks can run in and out through the spaces at the bottom, and can thus be either allowed complete liberty to range within call of their nurse, or can be enclosed within the litter yard in front, which also has moveable bars, to place food, water, &c., within their reach. An excellent fatting coop for fowls is shown in fig. 5.

Fig. 5.



During summer it may stand in a dry, shady spot in the open air; and in the cold months, may be lifted into the shelter of an out-house, or stable. It is six feet long, six feet high to the ridge of the roof, and two feet eight inches wide, with a partition in the middle so as to divide the fowls, and receive a succession of birds. The feeding-trough in front has a lid on the top, to receive the food without disturbing the trough. See BANTAM, COCHIN - CHINA, DUCKS, GEESE, GUINEA-FOWL, TURKEY, &c.

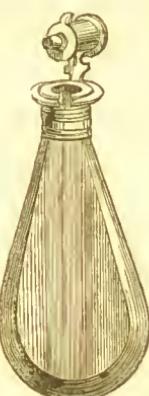
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POUNCE.—A substance used for smoothing paper after making erasures with a knife; it is rubbed on with the finger. To make it, powder very finely some gum-sandarac, sift it, and put it into a little box for use.

POUND CAKE.—Beat a pound of fresh butter to a cream, and put to it nine eggs, well beaten. Next beat them together till thoroughly mixed and light; and put to them a little sliced lemon-peel, or a few blanched almonds chopped, sifted sugar to taste, &c. Pound in a quartern of dried and sifted flour. Mix well, and bake in a pan for an hour, in a rather quick oven.

POWDER FLASK.—A portable receptacle for gunpowder. It is sometimes made of very stout leather, but is much more suitably made of either zinc or copper, in which latter cases it is flushed off according to fancy: safety, however, should be the first consideration; for many accidents have happened by the whole contents of a powder-flask becoming exploded at once; and which nothing can insure against but completely cutting off the passage between the powder separated for the barrel and that which remains within the flask. The one shown in the engraving will fulfil this purpose. Whatever flask is used, it should be so formed as that the neck, by sliding within another tubular portion affixed to the body of the flask, will measure out three or four different quantities of gunpowder; and according to the gauge of your gun, set this measure, first having weighed these several quantities, which should be engraved on the moveable top or measure.

POWDERS.—The powder is one of the forms of administering medicine, and employed when the medicament is too bulky in itself to admit of being made into a pill, and when a quicker action is desired than could have been obtained by giving the medicine in a form which would take several hours to dissolve in the stomach. Powders are always objectionable modes of giving physic, not only from the size they are sometimes compelled to be—from the subtle lightness of the drug—but from the difficulty of disguising for children, or making palatable so large a quantity of such unsavoury substances. But as the form of the powder is a necessity, and not a choice, the only alternative is to render it as little nauseous as possible; and as children are generally the recipients of this preparation, it is much better to practise a little harmless deception, than, by mixing it before them, lead to tears and struggles, in which half the medicine is lost, the child made suspicious of a spoon, disgusted with jam that tastes of physic, and irritated by what it considers a tyran-



nical injustice. To avoid this, the powder, in the first instance, should be made as small as is compatible with the effect desired, and having secretly mixed it with a little brown sugar in a cup, the child should be permitted to eat it dry; and if he is allowed to hold the folded paper in his hand, with the luxury of burning it when he has eaten the sugar, his satisfaction is equal to his triumph, and the effect of the medicine all the more certain, from the confidence with which it has been taken. The powders most frequently employed are those of an aperient, a febrifuge, and diaphoretic nature, and sometimes of an emetic character; but in the latter case they are invariably dissolved in water before taking—a mode of mixing that, when minerals are given, cannot be adopted, as such articles fall to the bottom of the vessel, and are lost to the patient. *Aperient powder for an adult.* 1. Take of—

- | | |
|---------------------------|------------|
| Jalap in powder | 15 grains. |
| Cream of tartar | 30 grains. |

Mix well, and add

- | | |
|-------------------|-----------|
| Calomel | 4 grains. |
|-------------------|-----------|

2. Take of—

- | | |
|-----------------------------|------------|
| Jalap | 15 grains. |
| Scammony | 8 grains. |
| Ginger in powder | 5 grains. |
| Antimonial powder | 6 grains. |

Mix. Either of these may be taken in a little sugar made into a paste by a few drops of water, or in jam, treacle, honey or gruel. *Fever powder for an adult.* 1. Take of—

- | | |
|-----------------------------|-----------|
| Nitre, powdered | 4 grains. |
| Ipecacuanha | 2 grains. |
| Antimonial powder | 3 grains. |

Mix. One to be taken every four or six hours. 2. Take of—

- | | |
|-----------------------------|-----------|
| Powdered sugar | 5 grains. |
| Tartar emetic | ½ grain. |
| Antimonial powder | 2 grains. |
| Calomel | 1½ grain. |

Mix; and take one every two, three, or four hours. *Diaphoretic or sweating powder for an adult.* 1. Take of—

- | | |
|--------------------------|------------|
| Dover's powder | 10 grains. |
|--------------------------|------------|

To be taken at bedtime. 2. Take of—

- | | |
|-----------------------------|-----------|
| Dover's powder | 5 grains. |
| Powdered squills | 1¼ grain. |
| Antimonial powder | 4 grains. |
| Calomel | 2 grains. |

Mix; and take at bedtime, following both this and the preceding powder, an hour after, by a hot drink of gruel, or some agreeable beverage.

PRAWN JELLY.—Make a savoury jelly of calf's feet or cow-heel, a piece of skate or trimmings of turbot, with horseradish, lemon-peel, an onion, and a piece of lean bacon. When boiled to a jelly, strain it; and when cold, take off the fat, keep back the sediment, and boil it up with a glass of white wine, the juice of a lemon, and the whisked whites and crushed shells of four eggs. Do not disturb it by stirring. When

boiled, let it settle for twenty minutes, and run it through a jelly bag. Pour some of the jelly into a deep dish; when it has solidified, put in prawns, with their backs downwards, fill up the dish with the jelly, and when cold turn the whole out.

PRAWN PIE.—Have ready as many well cleaned prawns as will nearly fill a pie-dish. Season with pounded mace, cloves, a little cayenne, or chili vinegar. Put some butter in the dish, and cover with a light puff paste. It will require about three-quarters of an hour to bake it.

PRAWN SOUP.—Boil a hundred prawns in a little water, vinegar, salt, and a few sweet herbs; save the liquor. Pick the prawns, and pound the shells together with a small roll. Pour the liquor over the shells in a sieve, and then pour two quarts of fish stock over them. Tear a lobster into small pieces, and add this with a quart of good beef stock to the whole. Simmer gently, savour with pepper and salt, thicken with floured butter, and serve.

PRAWNS POTTED.—Boil, and pick a sufficient number of prawns, then pound them in a mortar, and mix them up into a paste, with a little butter; season with white pepper, salt, and a little allspice, then press into the pots, and cover with clarified butter.

PRAWNS, TO BOIL.—Throw the prawns into plenty of fast-boiling water, to which salt has been added in the proportion of six ounces to the gallon; take off all the scum, and boil the prawns for eight or nine minutes. As soon as they are tender, drain them thoroughly in a cullender, and spread them out on a soft cloth to cool; or dish them on a napkin, and send them hot to table, when they are liked so. Ready-dressed prawns may be preserved fit for eating at least twelve hours longer than they would otherwise keep, by throwing them for an instant into boiling salt and water when they first begin to lose their freshness, and afterwards draining them.

PRECIPITATION.—The formation or subsidence of a precipitate. When the precipitate is the chief object of the process, it is necessary to wash it after it is separated by filtration. This operation requires little attention when the substance thrown down is insoluble in water; but when it is in some degree soluble in that liquid, great attention is required to prevent the loss which might result from the use of too much water. Precipitates soluble in water, but insoluble in alcohol, are frequently, on the small scale, washed with spirit more or less concentrated. The best precipitating vessel is a very tall glass jar, furnished with a lip and spout, and narrower at the bottom than at the mouth, so that the precipitate may readily collect by subsidence, and the supernatant liquor be decanted off with more ease.

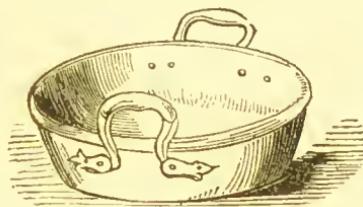
PREPOSITION.—In grammar, a part of speech used to express a relation between different things: thus, in—he went to town, he walked with his friends, the words to and

with connect the notions of "he went" and "he walked," respectively with the notions of "town" and "friend." Prepositions are so called because they are *preposed* or prefixed to the words with which they are connected; but this is sometimes a misnomer, as they are occasionally placed after such words, as in *wherewith*, *wherein*, *whereupon*, *thereby*. The following words are usually considered prepositions: — above; about; after; against; among; amongst; amid; amidst; around; at; between; betwixt; beyond; before; behind; beneath; below; beside; by; down; for; from; in; into; near; nigh; of; off; over; on; upon; since; through; throughout; till; until; to; unto; toward; towards; under; underneath; up; with; within; without.

PRESERVES. DIRECTIONS FOR PREPARING — In performing this process it is desirable to have three or four wooden spoons, or spatulas, a fine hair sieve, or two large squares of common muslin, and a strainer of closer texture. A pan, as seen in the engraving, is the one ordinarily used for boiling the fruit in. Brass pans, scoured

preserves should be carefully cleared of the scum as it rises. Fruit which is preserved in syrup must first be blanched or boiled gently, until it sufficiently softens to absorb the sugar; and a thin syrup must be poured on it at first, or it will shrivel instead of remaining plump and becoming clear. Thus, if its weight of sugar is to be allowed, and boiled to a syrup with a pint of water to the pound, only half the weight must be taken at first, and this must not be boiled with the water more than fifteen or twenty minutes at the commencement of the process; a part of the remaining sugar must be added every time the syrup is reboiled, unless it should be otherwise directed in the receipt. To preserve both the true flavour and the colour of the fruit in jams and jellies, boil them rapidly until they are well reduced, before the sugar is added, and quickly afterwards; but do not allow them to become so much thickened that the sugar will not dissolve in them easily and throw up the scum. In some seasons the juice is so much richer than in others, that this effect takes place suddenly: but the drop which adheres to the skimmer when it is held up, will show the state it has reached. Never use tin, iron, or pewter spoons or skimmers for preserves, as they will convert the colour of red fruit into a dingy purple, and impart besides a very unpleasant flavour. When cheap jams or jellies are required, make them with Lisbon sugar, but use that which is well refined always for preserves in general. Let fruits for preserving be always gathered in perfectly dry weather, and be free both from the morning and evening dew, and, as much as possible, from dust. Never squeeze fruit too much: take merely the juice that flows freely, and use what remains for made wine or plain jams. Unless preserves are bright, and of a fine colour, they will lose half their value; and this they will never be if the fruit is squeezed till the skins and seeds are broken. Let sieves be dipped in, and jelly-bags be wrung out of hot water before using them, or they will absorb a great quantity of the jelly. For tying down preserves, shape papers the size of the pots or jars, but leaving them an inch and a half longer, that they may tie and overlap the edges; brush these papers inside, till thoroughly saturated, with beaten white of egg; tie on while moist. They will dry and collapse like bladder. Nothing, however, can more thoroughly exclude the air than bladder over corks, or double bladder. For preserving raw fresh fruits that are merely scalded, good corks dipped in resin are effectual; and for preserved stone-fruit, melted suet in a thick layer is sometimes poured upon the paper.

PRESSER-ROLLER — An agricultural implement, the chief effect of the application of which is to produce consolidation in the soil over a narrow space, in which space the seeds of plants are to have root; hence its effects are applicable only to the drill system of culture, and that only under the particular circumstance of a consolidated soil the ordinary texture of which is too



till they are brightly clean, are still much used for making preserves; but a vessel of double block tin, or of iron very thickly tinned, or, better, enamelled, if kept for jellies and sweet things, answers very well, and is safer, particularly for the coarser preserves, which, being generally made with a coarse allowance of sugar, require long boiling. Damp is a great enemy to preserves, and they should therefore be kept in a dry cool place. When the slightest fermentation is perceptible in the syrup, it should be immediately boiled for some moments, and well skimmed; the fruit taken from it should then be thrown in, and well scalded also; and the whole, when done, should be turned into a very clean dry jar. The following are a few general rules and directions for preserving. Let everything used for the purpose be delicately clean and dry, bottles especially so. Never place a preserving pan flat upon the fire, as this will render the preserve liable to burn to, as it is called; that is to say, to adhere closely to the metal, and then to burn; it should rest always on a trivet, or on the lowered bars of a kitchen range, when there is no regular preserving stove in the house. After the sugar is added to them, stir the preserves gently at first, and more quickly towards the end, without quitting them until they are done; this precaution will always prevent the chance of their being spoiled. All

loose and friable for the continued support of the wheat plant, and close contact in the furrow-slices of the soil on being ploughed from grass for a seed furrow. The presser-roller is of very simple construction. The carriage consists of a rectangular frame. A pair of horse shafts are bolted upon the frame on the near side; a cast iron bracket supports the frame upon the axle. This axle carries the two pressing wheels, which are provided with the means of being fixed at any desired distance apart, though nine or ten inches is the usual space. The axle carries also the light carriage wheel. The off-side shaft is supported by an iron stay-rod; and two iron scrapers are attached to the hind bar, for the purpose of throwing off any soil that may adhere to the wheel.

PRIMROSE. — An extensive genus of small but very pretty and desirable plants. All the species of primrose succeed best in a mixture of loam and peat, and increase readily by seeds, or by dividing the plants, which should be done as soon as they have flowered.

PRIMROSE OINTMENT. — Brnise a pound of the leaves of the plant in a mortar, along with half a pound of the flowers; simmer them in an equal quantity of hog's lard, without salt, until the primroses become crisp; after which the ointment, whilst fluid, must be strained through a coarse sieve. This is an excellent application for obstinate ulcers, or for burns.

PRIMROSE PUDDING. — Take of petals of primroses, chopped fine, a quart; flour, half a pound, and a little salt. Mix these with water into a paste; form into a pudding; boil, and serve with melted butter and sugar.

PRIMROSE VINEGAR. — Boil four pounds of moist sugar in ten quarts of water for about a quarter of an hour, and take off the scum; then pour the liquor on six pints of primroses, add some fresh yeast before it is quite cold, and let it work all night in a warm place. When the fermentation is over, close up the barrel, and still keep it in a warm place for use.

PRINCIPAL AND AGENT. — The relative rights and duties of pricicipal and agent may be comprised as follows:—The first great duty of an agent is to use faithfully, and in its full extent, the authority which has been given him. An agent's authority is said to be limited when he is bound by precise instruction, and unlimited when he is not so bound. When his authority is limited, an agent is bound to adhere strictly to his instructions in every particular. Thus, if instructed to sell, he has no right to barter; nor if instructed to sell at a certain price, is he authorized to take less. When the agent's authority is not limited by precise instructions, his duty is to act in conformity with what may reasonably be presumed to be the intentions of his employer; and, in the absence of all other means of ascertaining what these intentions are, he is to act for the interest of his prin-

cipal according to the discretion which may be expected from a prudent man in the management of his own business. Thus, if he is authorized to sell, and no price is limited by his instructions, it should be his eudeavour to obtain the best price which the goods are fairly worth. If there have been other transactions of the same nature between the parties, it is to be presumed that the principal intends that the same mode of dealing should be pursued which in former cases he had prescribed or approved of. In mercantile transactions, it is a rule of universal application, that, in the absence of other instructions, the principal must be presumed to intend that his agent should follow the common usage of the particular business in which he is employed. This, therefore, is the course which it is the agent's duty to pursue; and he will in all cases be justified in so doing, even though, under the particular circumstances, he might have acted otherwise to the greater advantage of his principal. An authority is always to be so construed as to include all necessary or usual means of executing it with effect. An agent is, therefore, authorized to do all such subordinate acts as are either requisite by law, in order to the due performance of the principal effects of its instructions, or are necessary to effect it in the best and most convenient manner, or are usually incidental to it in the ordinary course of business.—See AGENT.

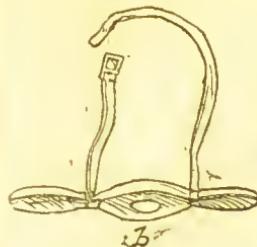
PROBANG. — An instrument used to remove obstructions which are lodged in the

Fig. 1. gullets of animals. The common

probang is represented in *fig. 1*, *a* being the cup-end, which is so formed that it may partially lay hold of the piece of turnip or potato, and not slip between it and the gullet, to the risk of rupturing the latter; and being of larger diameter than the usual state of the gullet, on being pressed forward, it distends the surrounding parts, and makes room for the obstructing body to proceed to the stomach. The probang is used in the following manner:—Let the piece of wood, *fig. 2*, be placed over the open mouth of the animal as a bit, and the straps of leather attached to it buckled tightly over the neck behind the horns, to keep the bit steady in its place. The use of the bit is, not only to keep the mouth open without trouble, but to prevent the animal injuring the probang with its teeth, and it offers the most direct passage for the probang towards the throat. Let two or three men seize the animal on both sides by the horns or otherwise, and let its mouth be held projecting forward in an easy position, but no fingers introduced into the nostrils to obstruct the breathing of the animal, nor the tongue forcibly pulled out of the side of the mouth. Introduce now the cup-end, *a*, of the probang through the



Fig. 2.



round hole, *b*, of the mouthpiece, fig. 2, and push it gently towards the throat until you feel the obstruction resisting your further progress; push then with a firm and persevering hand, cautioning the attendants, previously

to doing so, to hold on firmly; for the shifting of the obstruction by the instrument may cause the animal pain, and make it wince and even leap aside. The obstruction will now most likely give way, especially if the operation be performed before the obstructed parts have begun to swell; but if not, the probang must be used with still more force, whilst another person rubs with his hands up and down upon the distended throat of the beast. If these attempts fail, recourse must be had to the knife, and a veterinary surgeon sent for instantly.

PROLAPSUS.—A falling down, or more properly falling out, of some part of the viscera of the body, distinguished from a *procidentia*, or protrusion of the same parts. It will be, however, sufficient to confine the attention to one kind of prolapsus, common to very weak children, and those attended with worms, or of a scrofulous habit of body, and known as *prolapsus ani*, or falling down of the bowel. All the mother need do in this case is to dab the protruded part thoroughly with a piece of lint well wetted in the *extract of lead*, and gently return the part to its natural position. One or two applications, with a course of tonics, and bathing the hips and loins of the child in cold salt water every day, will be all that is necessary to effect a permanent cure of this distressing affection.

PROMISSORY NOTE.—A direct engagement in writing to pay a specified sum within a limited time, or on demand, to a person therein named, or his order, or to bearer. Promissory notes are transferable, and in all respects are so nearly assimilated to bills of exchange, that all the decisions and rules relative to one, are in general applicable to the other. The chief distinction between them is, that there are only two parties to a note, the drawer of a note standing in the place of the acceptor of a bill. No formal set of words is necessary to the validity of a promissory note; nor is it essential it should contain any words rendering it negotiable. A note promising to account with another, at his order, for a certain sum, value received, is a valid promissory note, though it contains no formal promise to pay. A note beginning, "I promise to pay," and signed by two or more persons, is a several as well as a joint note, and the parties may be sued jointly or separately: so, if the note begin, "We jointly and severally promise to pay;" but when a pro-

missory note is made by several, thus, "We promise to pay," it is a joint note only.

PRONOUN.—In grammar a part of speech indicating a word that supplies the place of a noun. Pronouns are of three classes—personal, relative, interrogative. The personal pronouns are three in number—namely, *I, thou, he* (*she, or it*). All pronouns refer to some noun, which, as it generally goes before, gets the name of antecedent; but as it may come after, correlative would appear a better term. In the case of one class of pronouns, the reference is so obvious and immediate, that they have been called relative by way of distinction. These are *who, which, that, as*. *Who* is used when the reference is to a person; *which*, when it is to a thing; *that* and *as* refer to persons or to things. The interrogative pronouns, so called because they are used to ask questions, are *who, which, what, and whether*. When *what* is not used to ask a question, it gets the name of compound relative pronoun, as it includes in itself the ideas of both correlative and relative; thns, "Give me *what* is in your hand" is equivalent to "Give me the *thing* which is in your hand." The inseparable word *self*, with its plural *selves*, is called the reciprocal pronoun, and denotes that the object and agent of the verb are the same. *Self* is added to personal pronouns for the same purpose that *own* is affixed to pronominal adjectives; that is, to express emphasis or opposition. Thns, "I did it with my own hand," that is without the assistance of any other person; "He did it all *himself*," that is without the assistance of any other.

PRONUNCIATION.—The principal rules of pronunciation are as follows:—*C* before *a, o, and u*, and in some other situations, is a close articulation like *k*. Before *e, i, and y*, *c* is precisely equivalent to *s* in same, thus, as in *cell, cider, cypress*. *E* final indicates that the preceding vowel is long, as in *hate, mete, sire, robe, lyre, abute, recede, invite, remote, intrude*. *E* final indicates that *c* preceding has the sound of *s*, as in *lace, lance*; and that *g* preceding has the sound of *j*, as in *charge, page, challenge*. *E* final in proper English words never forms a syllable, and in the most used words in the terminating unaccented syllable, it is silent; thus, *nature, genuine, examine, granite*, are pronounced *natur, genuin, examin, granit*. *E* final in some words of foreign origin forms a syllable: *syncope, sinile*. *E* final is silent after *t* in the following terminations, *ble, cle, dle, fle, gle, kle, ple, tle, zle*, as in *able, manacle, cradle, raffle, mangle, wrinkle, supple, rattle, puzzle*, which are pronounced *ab't, man'acl, cra'dl, raf'fl, man'gl, wrin'kl, sup'pl, puz'zl*. *E* is usually silent in the termination *en*, as in *token, broken*, pronounced *to'kn, bro'kn*. *ous* in the termination of adjectives and their derivatives is pronounced *us*, as in *gracious, pious, pompous*. *Ce, ci, ti*, before a vowel, has the sound of *sh*, as in *celaceous, gracious, motion, partial, ingratiate*, pronounced *celashus, grashus, moshon, parshal, ingrashiate*. *Ti*, after a consonant, has the sound of *ch*, as in *christian, bastion*, pronounced *chrishan, bas-*

chon. Si, after an accented vowel, is pronounced like *zh*, as in *Ephesian, confusion*, pronounced *Epheshan, confuzhon*. When *cl* or *ti* precede similar combinations, as in pronunciation, *negociation*, they may be pronounced *ce* instead of *she*, to prevent a repetition of the latter syllable, as *pronunceashon* instead of *pronunsheashon*. *Gh*, both in the middle and at the end of words, is silent, as in *caught, brought, frigh, nigh, sigh*, pronounced *caul, baut, frite, ni, si*. In the following exceptions, however, *gh* is pronounced as *f*: *cough, chough, clough, enough, laugh, rough, tough, trough*. The seven sounds which the combination *ough* variously assumes, are illustrated in the following couplet:—

"Though the rough cough and hiccough
plough me through,
'Mid life's dark lough my course I still
pursue."

When *wh* begins a word, the aspirate *h* precedes *w* in pronunciation, as in *what, whiff, whale*, pronounced *hwat, hwif, hwale*, *w* having precisely the sound of *oo*; in the following words *w* is silent: *who, whom, whose, whoop, whole*. *H* after *r* has no sound as in *rheum, rhyme*, pronounced *reum, ryme*. *H* should be sounded in the middle of words, as in *forehead, abhor, behold, exhaust, inhabit, unhorse*. *H* should always be sounded except in the following words: *heir, herb, honest, honour, hospital, hostler, hour, humour, humble*, and all their derivatives, as *honestly, honourable, &c.* *K* and *g* are silent before *n*, as in *gnaw, pronounced no, nau*. *W* before *r* is silent, as in *wrong, wreath*, pronounced *rong, reath*. *B* after *m* is silent, as in *dumb, numb*, pronounced *dum, num*. *L* before *k* is silent, as in *bauk, talk, walk*, pronounced *bauk, tawk, wauk*. *Ph* has the sound of *f*, as in *philosophy*, pronounced *filosofy*. *Ng* has two sounds, the one as in *sugar*, the other as in *finger*. *N* after *m*, and closing a syllable, is silent, as in *hymn, condemn*. *P* before *s* and *t* is mute, as in *psalm, pseudo, pharmigan*, pronounced *sahm, sudo, tarmigan*. *R* has two sounds, one strong and vibrating, as at the beginning of words and syllables such as *rock, reckon, raw*; the other at the termination of words, or when it is succeeded by a consonant, as *farmer, morn*. Before the letter *r* there is a slight sound of *e* between the vowel and the consonant; thus, *bare, parent, mere, mire, more, pure*, are pronounced nearly *baer, paerent, meer, mier, moer, puer*. There are other rules of pronunciation affecting the combination of vowels, &c.; but the foregoing are the chief.

Errors made in pronunciation are very numerous, and many of them grate offensively on the ear; the abuse of the letter *H*, being aspirated when it should be silent, and silent when it should be aspirated, is one of the most prominent of these faults. Pronouncing the letter *u* as though it were *oo* is also another error very generally committed. The interchange of *w* for *v*, and *v* for *w*; the sound *k* instead of *g* at the termination of words, as *smothink, nothink*; the addition of *r* at the end of words ending in vowels, as *idear, Elizar*; and the

pronouncing of words ending in *ow* as though they were spelt *er*—are all of them offences against correct pronunciation and good taste. A glaring error, even amongst intelligent persons, is dropping the final consonant in a word, such as *bread an' butter, what will you gi'e for it, no more o' that*, instead of *bread and butter, what will you give for it no more of that*. To attain a faultless pronunciation, a person should exercise himself in writing down certain sentences, repeating them to himself, and correcting errors which fall upon his ear, until he is perfect.

PRUNING.—In gardening and the culture of fruits, pruning denotes the removal of the excrescences or superfluous portions of trees, with the view of rendering the trees more fruitful, to make them grow higher and with greater regularity, or to produce larger and better flavoured fruit. It carried to too great an extent, the desired result is not obtained, for every tree requires a certain amount of leaf-surface for the elaboration of its sap; and, therefore, if this be reduced too much, blossom-buds are produced less abundantly, for leaves are more necessary for the health of the plant; and, by a wise provision, the parts less requisite for individual vigour are superseded by the parts more needed. On the other hand, if the branches are left too thick, they over-shadow those beneath them, and so exclude the light as to prevent that elaboration of the sap, without which no blossom-buds are formed, but an excessive production of leaves, in the vain effort to attain by an enlarged surface that elaboration which a smaller surface would effect in a more intense light. The season of pruning must be regulated in some degree by the strength of the tree; for although, as a general rule, the operation should not take place till the fall of the leaf indicates that vegetation has ceased, yet, if the tree be weak, it may often be performed with advantage a little earlier; but still so late in the autumn as to prevent the protrusion of fresh shoots. The chief guide in pruning consists in being well acquainted with the mode of the bearing of the different sorts of trees, and forming an early judgment of the future events of shoots and branches, and many other circumstances for which some general rules may be given; but there are particular instances which cannot be judged of but upon the spot, and depend chiefly on practice and observation. Summer pruning is a most necessary operation. Young shoots require thinning to preserve the beauty of the trees and to encourage the fruit; and the sooner it is performed the better. It is, therefore, advisable to begin this work in May, or early in June, removing all superfluous growths and ill-placed shoots, which may be done with considerably more expedition and exactness than when the trees have shot a considerable length. When, however, a tree is inclined to luxuriance, it is proper to retain as many of the regular shoots as can be commodiously trained in with any regularity, in order to divide and exhaust the too abundant sap. It will be necessary to review the trees occasionally,

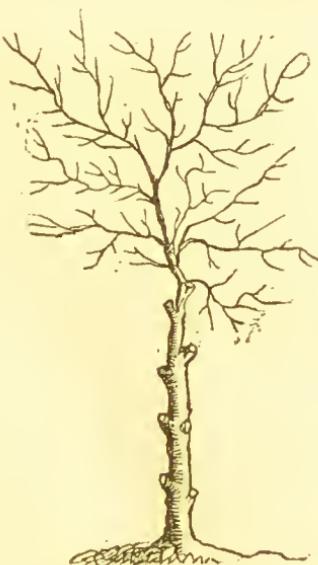
in order to re-form such branches or shoots as may have started from their places, or taken a wrong direction; and, according as any fresh irregular shoots protrude after the general dressing may he displaced, or as the already trained ones advance in

length, or project from the wall or espalier, they should be trained in close. In the winter-pruning, a general regulation must be observed, both of the mother branches, and the supply of young wood laid in the preceding summer; and the proper time for this work is any period during open weather, from November till March; but the sooner the better. In performing this work, it is proper to un-nail or loosen a chief part of the branches, particularly of peaches, nectarines, apricots, vines, and other trees requiring an annual supply of young wood. The effects of judicious and injudicious pruning are illustrated by the accompanying engravings. Fig. 1 represents a tree of

Fig. 1.



Fig. 2.

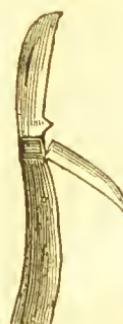


thirty years' growth, which has been regularly and properly pruned. Fig. 2, a tree of the same age, which has been neglected as

to pruning during its early growth, and has now been pruned in a way too frequently practised, namely, by sawing and lopping off the branches after they have attained a large size. Fig. 3 shows the sad consequences of neglecting early pruning in the case of a plank cut from an ash tree, which has been pruned by lopping off the large branches for many years before it was felled. The cuts in this case had been made several inches from the bole, and the branches left being very large, the stumps had become rotten. The enlargement of the trunk had not, however, been stopped, for the new wood had covered over all the haggled parts, in some places to several inches thick. Yet the effects of the previous exposure to the action of the weather, by injudicious pruning, is strikingly marked by the decayed state of the parts connected with branches which had been amputated. From this it will clearly appear that, if pruning is to be practised on deciduous trees at all, it should be commenced while they are young, and carried on progressively; and if so, no such blemishes will be found in the timber when cut up. Yet it does sometimes happen that young plantations under twenty years' growth are to be pruned. In such cases, when the ill-placed branches, or those intended to be removed, exceed in diameter two inches, it is better to commence at their extremities and shorten them back yearly. By thus cutting off their supplies, the base of the branch will be lessened more and more of its nourishment, it will become sickly, and ultimately die away altogether.

The implements employed for pruning are various; the following will be found the most useful, and with them every operation of pruning may be advantageously accomplished. Of pruning knives, a small pocket pruner having two blades, the one larger than the other, is to be recommended for general use. Its merits consist in its lightness and small bulk, as well as its being useful for pruning, making cuttings, and cutting flowers. Pruning chisels are nearly as various as pruning knives. The best, however, are in shape of a carpenter's chisel, but with a handle of greater or less length and strength, according to the height

Fig. 3.



and size of the branch to be amputated. They vary in breadth of cutting face from one to three inches, and are wrought by placing the face of the chisel upon the part

of the branch where the cut is to be made, and being held there by one man, while another with a wooden mallet, striking upwards, drives the chisel through the branch. Thus, branches of almost any size, from seven to twenty feet from the ground, may be cut off. Branches nearer the ground may be cut off with chisels having shorter handles, as shown in the engraving. Another modification of it is sometimes used in orchard and ornamental tree pruning, differing only from the former in having a guard or plate placed behind the blade, to prevent it entering too far into the trunk from which the branch is to be removed. The advantage of the pruning chisel in all cases over the pruning saw, is its saving the trouble of ascending the tree, and the damage that may be done to the branches by a man going up to cut off the branch. An excellent substitute for all pruning chisels is found

in the American or Indian pole-saw, depicted in the annexed figure. This has a blade about four inches broad, and from eighteen inches to two feet in length, fixed to a pole-handle of any required length, so as to reach the branch to be removed. This saw differs from the ordinary implement, in operating, by pulling instead of thrusting; so that a person standing on the ground can work the saw to every advantage, while it is sufficiently stiff not to break while passing through the wood. The cuts made by a saw should have the wound smoothed by the knife or small plane, and in most cases be painted over with some mild paint to exclude the air and moisture. The pruuing bill is a species of large knife, and in the hands of an expert workman is valuable, in cutting off branches larger than the pruuing knife could sever. The stroke should always be given in an upright direction, and, if possible, one blow should perform the operation. They are very useful in pruning thick and overgrown shrubbery, as they can be wrought with greater effect in thick jungles than almost any other cutting implement. Sometimes they have

only one cutting face, and that is in general somewhat crooked towards the point; at other times they have an axe-like face of several inches in length upon their back, useful in cutting large

branches; and at others they have instead of a cutting face upon their back, a set of teeth or serratures, by which the operation of sawing may be performed. Pruning shears are of a still greater variety; one of the smallest of the kind, and particularly useful for pruning off tender shoots, is seen in the accompanying figure. It may also be used for cutting off leaves, bunches of grapes, flowers, &c., that may not be readily reached by the hand; and while it severs the leaf and stem, still holds the thing severed until it may be taken in the hand. The curve passing round the handle and lever in the form of a ring, when pulled downwards by the cord, draws the leaves towards the handle, and causes the shear-like faces to meet; these, instead of being sharp at their edges, meet in what may be called the half check form, bruising rather than cutting asunder the footstalk of the flower or leaf, and thus preventing its falling. The stud above the ring prevents it from slipping upwards, and the spring between the lever and handle keeps the shears open until acted upon by the cord.

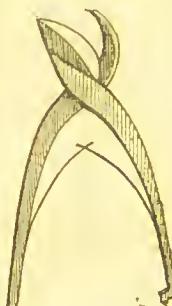
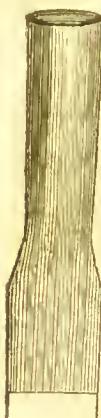
PRUNE PUDDING.—Mix four tablespoonfuls of flour in a quart of milk; add six eggs, two teaspoonfuls of powdered ginger, a little salt, and a pound of prunes. Tie the mixture in a cloth and boil for an hour.

Flour, 4 tablespoonfuls; **milk,** 1 quart; **eggs,** 6; **ginger,** 2 teaspoonfuls; **salt,** sufficient; **prunes,** 1lb.

PRUNE TART.—Wash and scald the fruit; take out the stones, and either bruise them and take some of the chopped kernels to add to the tarts, or not, as preferred. Add sugar to taste to the fruit, and bake it as a tart.

PRUNES STEWED.—Put the prunes into a small saucepan with very little water, and stew them till they are soft, but not to a mash. The stones may be broken and a few of the kernels put to the stew. Prunes thus prepared prove very wholesome, and are frequently employed medicinally as a gentle laxative.

PRUSSIC ACID.—A compound of the three elementary gases, nitrogen, hydrogen, and carbon. Its odour is powerful and peculiar, and pungent to the nostrils, and is often compared to that of bitter almond.



The uses of medicinal prussic acid in the hands of a properly qualified practitioner are most valuable; it acts as a powerful sedative, allaying pain, sickness, and nervous irritability; it is also a most admirable addition to lotions for various purposes, but in every form cannot safely be had recourse to as a domestic remedy.—For information respecting poisoning by prussic acid, see *Poisons*.

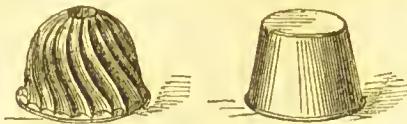
PUBLISHING.—The method by which books, when printed, are disseminated amongst the public. Untried authors frequently experience the greatest difficulty in finding a person to undertake the publication of their works, and this must be necessarily the case, inasmuch as it is a matter of the purest speculation as to whether the works in question will be well or ill-received by the public. When an author, however, possesses the means, and is determined to produce his book, he may surmount this obstacle by having the work published on his own account, that is to say, he himself goes to the expense of printing, paper, binding, advertising, &c., and supplies a publisher with a certain number of copies, who sells the work on behalf of the author, and renders an account periodically, charging a percentage on the amount sold, by way of commission. Should a work thus produced, chance to be successful, the same author may, in all probability, dispose of a subsequent work by selling the copyright to the publisher for a certain sum, and thus avoid any expense or responsibility in the matter. Another mode of publishing, is for the publisher to undertake the production of the work at his sole expense, and to allow the author a certain share of the profits after all expenses are paid. A third method is for the author to sell an edition of a work to the publisher for a specified sum; the author thus secures a certain benefit, and also reserves to himself the copyright, from which he may publish subsequent editions on the same terms as the first. There are several things to be borne in mind by an author in the publication of his work, if he is desirous of rendering it successful. In the first place, he must seek out a publisher who is in the habit of publishing works of a kindred nature; there is an obvious advantage in this, because it follows as a matter of course that a publisher who disseminates an especial class of works, has a reputation in that particular department; this generates what is termed a connection, and through this connection the publisher is enabled always to dispose of a certain number of copies of a work in the branch of literature for which he is celebrated, provided, of course, that the work, both as regards its intrinsic value and external appearance, comes up to the usual standard. Another matter of importance is, that the work should be advertised generally and persistently; this aid to publicity is highly essential, for, without it, the very best of works published under the happiest auspices will fail to make their way. Nor should this be done in a partial and timid manner; in calculating the probable expenses of a work about to be produced, the

producer should set down a good round sum for advertising expenses, and disburse that sum with the full assurance that the outlay will be more than repaid. This is of importance, not only as regards the immediate sale of the work to the public, but as affecting the goodwill and exertions of the publisher. If, by dint of advertising, a work is being continually demanded, the publisher is as continually reminded of its existence, awards it a certain amount of attention, and appropriates to it a prominent place. But, if from the want of advertising, the work is seldom or never asked for, its existence becomes almost forgotten; it gradually recedes to the upper and backward shelves, and becomes, in the course of time, literally dead stock. A third important feature in publishing is, that the author previously to producing his book should weigh well in his mind the expences that he must assuredly incur, and the proceeds which he may reasonably calculate upon accruing. To arrive at this result, he must determine on the number of pages the proposed work is to contain, the quality of paper to be used, and the style of binding that will be employed; he must then procure from the printer, the stationer, and the bookbinder, the several estimates for the material and work referred to; to these he must add, as before mentioned, a sum for advertising, which had better be regulated by the advice of the publisher. Opposite to this, the author can set down the number of books to be printed at so much per copy, and balance the total thns produced against the total of expenses. It must be borne in mind, however, that the selling-price of a book is a nominal one, so far as the author is concerned; for from this price the publisher has to allow "the trade" certain reductions, and these, together with the publisher's own commission, amount to about forty per cent. That is to say, that if a book were published at half-a-crown, and a thousand copies of such work were sold, although the nominal produce would be £125, the amount which the author would be entitled to receive would not be more than £75. This appears to be a large deduction from an amount, the whole of which, a novice in authorship imagines he is entitled to receive. But it must be borne in mind that the author on his part derives many advantages by his connection with the publisher; he is spared all trouble entailed by the sale and forwarding of the work, he is not called upon to give credit, and he reaps the benefit of the publisher's position and celebrity, so that without these aids an author would find the publishing of a work an unremunerative and disheartening speculation to embark in.

PUDDING.—See *ALMOND*, *APPLE*, *APRICOT*, *ARROWROOT*, *BATTER*, *BLACKBERRY*, *BREAD AND BUTTER*, *CABINET*, *CUMBERLAND*, *CUSTARD*, *GOOSEBERRY*, *LEMON*, *MARROW*, *PLUM*, *PUMPKIN*, *RICE*, *SAGO*, *TAPIOCA*, &c.

PUDDING CUPS.—A variety of small and elegant puddings may be prepared at a few minutes notice, and baked in cups such as seen in the engravings. Puddings thus

improvised have the advantage of being easily made, comparatively inexpensive, and an agreeable addition to the repast.



PUFF PASTE.—Break lightly into two pounds of dried and sifted flour eight ounces of butter; add a pinch of salt and sufficient cold water to make the paste; work it as quickly and as lightly as possible, until it is smooth and pliable; then level it with a paste-roller till it is three-quarters of an inch in thickness, and place regularly upon it, six ounces of butter in small bits; fold the paste like a blanket pudding; roll it out again, lay on it six ounces more of butter, repeat the rolling, dusting each time a little flour over the board and paste, add again six ounces of butter, and roll the paste out thin three or four times, folding the ends into the middle. If very rich paste be required, equal portions of flour and butter must be used; and the butter may be divided into two instead of three parts when it is to be rolled in.

PUFFS.—An article of pastry which may be made as follows: Mix two tablespoonfuls of flour, with a quarter of a pint of cream, two eggs well beaten, the fourth of a teaspoonful of grated nutmeg, four bitter almonds pounded, two teaspoonfuls of ratafia, and an ounce of butter beaten to a cream. Bake these ingredients in small buttered cups for half an hour; turn them out in a dish, and serve immediately with sweet sauce poured over them.

Flour, 2 tablespoonfuls; cream, $\frac{1}{4}$ pint; eggs, 2; nutmeg, $\frac{1}{4}$ teaspoonful; bitter almonds, 4; ratafia, 2 teaspoonfuls; butter, 1oz.

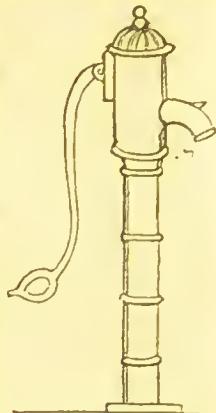
PULSE.—The beat or stroke of an artery which is felt by pressing the finger on the wrist. The frequency of these contractions is regarded by medical men as a criterion of the state of the health. In the calm undisturbed state of the body of the adult, the beats are estimated at about seventy in the minute; while, when disease is present, the frequency of the pulse is sometimes fully double. It is not often that it falls below the healthy standard of seventy. It is generally somewhat quicker in the female than in the male; and is always more rapid in early life than in advanced age. In the newly-born infant it is about a hundred and forty. In extreme old age it often falls to sixty; sometimes to forty, and even as low as thirty. The indications of the pulse are of the highest importance, and any extraordinary increase or decrease, is a sure sign of disease.

PUMP.—An implement for forcing water, indispensable in domestic and rural economy. For the latter, the most suitable kind of pump is that shown in the engraving, which

according to the bore, or diameter, may be had at various prices, from £2 upwards; the total price depending on the length of tube required to reach the bottom of the well. The operation of the common forcing pump consists in a suction pipe descending into a well, tank, &c., containing water, and having in it a valve opening upwards. The piston, or working barrel, contains a solid piston without any valve, moved up and down by the rod. Siebe's rotatory is found very convenient, either for raising water from a tank or well, or by forcing it up to any height. This pump operates by the rotation of a roller on its axis, having paddles or pistons, by which, when the roller is turned, a vacuum is produced within the barrel. In consequence of this vacuum the water flows up a rising break into the barrel; and as the paddles go round they force it into an opening, which conducts it wherever it may be wanted, and by that means produces a continuous stream. By having an ascending tube, the water may be forced to any height; and by having a horizontal tube with a cock, it may be let out at pleasure as in a common pump. By having several pipes branching from the ascending tube, as many cisterns or reservoirs may be supplied.

PUMPKIN, CULTURE OF.—This plant is propagated by seed, which may be sown in a hotbed of moderate strength, under a frame or hand-glasses, at the end of March or early in April. In May they may be sown in the open ground beneath a south fence, to remain, or in a hotbed if at its commencement, to forward the plants for transplanting at its close, early in June. The plants are fit for transplanting when they have got four rough leaves, or when of about a month's growth. They must be planted without any shelter on dunghills, or in holes prepared in the open ground. Some may be inserted beneath pales, walls, or hedges, to be trained regularly over them, on account of their ornamental appearance. They may be treated in every respect like the cucumber, only they do not need so much care. They require abundance of water in dry weather. When the runners have extended to the distance of three feet, they may be pegged down, and covered with earth at a joint; this will cause the production of roots, and the longer continuance of the plant in vigour. The fruit for seed should be selected and treated in the same manner as for the cucumber. It is ripe in the course of September or October.

PUMPKIN PIE.—Take out the seeds, and pare the pumpkin, but do not scrape



the inside, as the part nearest the seeds is the sweetest. Stew the pumpkin with a little salt, and press it through a cullender. For a large pie, to one quart of milk add four eggs beaten up, a tablespoonful of powdered cinnamon, four tablespoonfuls of sugar, half a teaspoonful of ginger, the peel of a lemon grated, and half a teaspoonful of the juice. Mix the pumpkin thoroughly with these ingredients, and place the whole into a pie-dish, with a thin under-crust. Bake in a moderate oven for about an hour.

Pumpkin, 1; milk, 1 quart; eggs, 4; cinnamon, 1 tablespoonful; sugar, 4 tablespoonfuls; ginger, $\frac{1}{2}$ -teaspoonful; lemon-peel, 1; lemon-juice, $\frac{1}{2}$ -teaspoonful.

PUMPKIN PUDDING.—Take eight eggs, a pint of stewed pumpkin, a quarter of a pound of butter, a quarter of a pound of sugar, two tablespoonfuls of brandy, a teacupful of cream, a teaspoonful of cinnamon, and a teaspoonful of nutmeg. Stew the pumpkin in a small quantity of water, mash it very fine, add the butter, and let it stand to cool. Then beat up the eggs, and when the pumpkin is cool, add them and the other ingredients. Line a pudding basin with paste, pour in the pumpkin, and bake in a moderately hot oven.

Pumpkin stewed, 1 pint; butter, $\frac{1}{2}$ lb.; sugar, $\frac{1}{2}$ lb.; brandy, 2 tablespoonfuls; cream, 1 teacupful; cinnamon, 1 teaspoonful; nutmeg, 1 teaspoonful; eggs, 8.

PUMPKIN SOUP.—Into two quarts of cold water put three pounds of pumpkin, cut into thin slices, peeled, and with all the seeds removed; two large onions, also peeled and sliced, with a small head of celery, cut into very small pieces. Boil these together slowly for two hours and a half; and then, after adding an ounce of dripping, two large tablespoonfuls of flour, and a seasoning of pepper and salt, boil for half an hour longer, and stir frequently during the whole of the boiling. The pumpkins saved for seed are better for this purpose than those which are less ripe and more watery.

Pumpkin, 3 lbs.; onions, 2; celery, 1 head; dripping, 1 oz.; flour, 2 tablespoonfuls; pepper and salt, to season.

PUNCH.—A name given to a mixture composed of water, spirit, sugar, and acid. The punch most generally made is composed of equal parts of rum and brandy; but any mixture of spirits, or one spirit alone, if there be acid with it, is called punch. The following are among the most approved receipts for compounding this beverage. **Ordinary punch.**—Take two large rough lemons, juicy, and with rough skins; rub some large lumps of loaf sugar over the lemons till they have acquired the oil from the rind, then put them into a bowl, with as much more sugar as is necessary to sweeten the punch to taste; squeeze the lemon-juice upon the sugar, and bruise the sugar in the juice; add a quart of boiling water, and mix well; then strain through a fine sieve, and add a quart of rum, or a pint of rum and a pint of brandy, or a pint and a half of rum and half a pint of porter; then add

three quarts more of water, and mix well. **Oxford punch.**—Extract the essence from the rinds of three lemons, by rubbing them with lumps of sugar; put these into a large jug, with the peels of two Seville oranges, of two lemons, cut extremely thin, the juice of four Seville oranges and of ten lemons, and six glasses of calf's foot jelly in a liquid state. Stir these well together, pour to them two quarts of boiling water; cover the jug closely, and set it near the fire for a quarter of an hour; then strain the mixture through a sieve into a punch-bowl or jug, sweeten it with a bottle of capillaire, add half a pint of white wine, a pint of French brandy, a pint of rum, and a bottle of orange sbrub; stir the punch as the spirit is poured in. **Roman punch.**—Take a quart of lemon-ice, add the whites of three eggs, well beaten, with rum and brandy, till the ice liquefies, in the proportion of three parts of rum to one of brandy, and water to taste. Then add a small teacupful of strong green-tea infusion, strained; also, half a pint of champagne. **Regent's punch.**—Take a bottle of champagne, a quarter of a pint of brandy, the juice of a lemon, a Seville orange, and a wineglassful of Martinique; with this mix a pint or more of strong infusion of the best green tea, strained; add syrup or sugar to taste. **Norfolk punch.**—Steep the peels of six lemons and six oranges in a gallon of brandy for two days; then make a syrup with three pounds of loaf sugar, and when it is quite cold, add it to the brandy, which should have been previously strained; add the strained juice of eighteen lemons and eighteen oranges, and let the whole stand for six weeks in a closely-corked jar, after which, bottle. **Tea punch.**—Make an infusion of the best green tea, from an ounce of tea to a quart of water; put before the fire in a silver or other metal bowl, to become quite hot, and then put into it half a pint of brandy, half a pint of rum, a quarter of a pound of loaf sugar, and the juice of a large lemon; set these into a blaze, and pour in the tea gradually, mixing it from time to time with a ladle; it will thus remain burning for some time, and in this state is to be poured into the glasses.

Ordinary punch.—Lemons, 2; sugar, sufficient; boiling water, 1 quart; rum, 1 quart; or, rum, 1 pint; brandy, 1 pint; or, rum, $1\frac{1}{2}$ pint; porter, $\frac{1}{2}$ pint; boiling water, 3 quarts. **Oxford punch.**—Rinds of lemons rubbed with sugar, 3; thin peel of lemons, 2; of Seville oranges, 2; juice of 4 Seville oranges and 10 lemons; calf's foot jelly, 6 glasses; water, 2 quarts; capillaire, 1 bottle; white wine, $\frac{1}{2}$ pint; French brandy and Jamaica rum, each 1 pint; orange shrub, 1 bottle. **Roman punch.**—Lemon-ice, 1 quart; eggs, 3 whites; rum and brandy, sufficient to liquefy; water, to taste; green-tea infusion, 1 small teacupful; champagne, $\frac{1}{2}$ pint. **Regent's punch.**—Champagne, 1 bottle; brandy, $\frac{1}{2}$ pint; lemon, juice of 1; Seville orange, 1; Martinique, 1 wineglassful; green-tea infusion, 1 pint; sugar, to taste. **Norfolk punch.**—Peels of six lemons and 6 oranges; brandy, 1 gallon; sugar,

3lbs.; juice of 18 lemons and 18 oranges.
Tea punch.—Green-tea infusion (tea, 1 oz.; water, 1 quart); brandy, $\frac{1}{2}$ pint; rum, $\frac{1}{2}$ pint; sugar, $\frac{1}{2}$ lb.; lemon, juice of 1.

PUNCH JELLY.—Dissolve an ounce of isinglass in six teacupfuls of water; strain, and add to it, when boiling hot, half a pint of brandy, the same of rum, and a teacupful of lemon-juice, with half a pound of powdered loaf sugar; stir till the sugar is dissolved, and pour it into a shape.

Isinglass., 1oz.; water, 6 teacupfuls; brandy, $\frac{1}{2}$ pint; rum, $\frac{1}{2}$ pint; lemon-juice, 1 teacupful; sugar, $\frac{1}{2}$ lb.

PUNCTUATION.—The art of dividing written or printed composition into sentences and clauses by points or stops, so as to indicate the closer or more remote connection of the several parts. It serves to elucidate the sense, and thus also assists the delivery, since the latter must have reference to the grammatical construction. The points used in English composition are:—The comma (,), the semicolon (;), the colon (:), the period or full stop (.), the note of interrogation (?), the note of admiration (!), to which may be added the dash (—), the apostrophe ('), and the parenthesis (). It is considered that the proper length of the pause of a comma is while we may count one; at a semicolon, two; at a colon, three; and at a period, four. But there is frequently a much greater separation of the sense, and there ought, therefore, to be a longer pause at some commas than at others. The form and structure of sentences are so various, that it would be difficult, if not impossible, to lay down rules for punctuation which should meet every case that can occur. The following may serve as a general guide:—The comma is used to throw together such similar parts of speech as are joined in pairs by the conjunction *and*. To separate the several members of a series, that is, a succession of similar words or members. To separate from the rest of the sentence such clauses as are added by way of explanation or illustration, or such as are really parenthetical, though they may not be so marked. To separate from the rest of the sentence words in the vocative case. In many cases to separate the relative and the antecedent. To separate from the rest of the sentence such clauses as are introduced by a connective, conditional, or exceptive particle, or by an adverb of time or place; and to separate antithetical clauses, and such comparative clauses as are introduced by the adjectives *like*, *better*, by the conjunctions *as*, *so*, *than*, by the adverbs *how*, *much*, *more*, *oftener*, *rather*, unless the comparative member at the end be short. The semicolon is used when a longer pause is required than at a comma, but when the sense is imperfect, and needs some other member to render it complete. Or it is used for dividing compound sentences into two or more parts which are not so closely connected as those which are separated by commas only, nor yet so independent and perfect as those which admit a colon. The colon may be inserted when a member of a

sentence is complete in itself, but is followed by some additional remark or illustration of the subject. When several semicolons have preceded, and when a longer pause is necessary in order to mark the connecting or concluding sentiment. A colon is also generally placed at the close of the words which introduce an example, a quotation, a saying, a speech, or a narrative. The period or full stop is placed at the end of a sentence, that is at the end of such an assemblage of words as present a complete and independent sense. The note of interrogation is placed at the end of every question. The note of admiration is placed at the end of such words or clauses as express any strong passion or emotion of the mind. The dash should be used sparingly; it is introduced with propriety where a sentence or a dialogue breaks off abruptly; when the sense is suspended and continued after a short interruption; where a significant pause is required; where there is an unexpected turn in the sentiment, or a sort of epigrammatic point; when a sentence consists of several clauses which form the nominative to a verb following, or lead to a conclusion or inference, and it is desirable to assist the eye more readily than by semicolons; and in some cases to indicate an ellipsis. The apostrophe shows the omission of a letter, as in *form'd, e'er*, used chiefly in poetry; and in the possessive case, as *man's, boy's*, both in prose and poetry. The parenthesis marks a clause, which should contain some necessary information, or a useful remark introduced into the body of a sentence indirectly, but which might be omitted without doing injury to the sense or the construction. This species of punctuation should be used but very sparingly, as its too frequent introduction tends to confound the sense and distract the reader's attention. It also betrays carelessness of composition, as, in the majority of cases, the parenthetical matter might be very easily incorporated with the sentence, in its regular order.

PURGATIVE.—A medicinal agent, divided into five orders, according to their particular actions. 1. Laxatives, lenitives, or mild cathartics, as manna, cassia pulp, tamarinds, prunes, honey, phosphate of soda, castor, almond and olive oils. 2. Saline or cooling laxatives, as Epsom salts, Glauber's salts, &c. 3. Active cathartics: as rhubarb, senna, aloes. 4. Drastic or violent cathartics: as jalap, scammony, gamboge, eroton oil, colocynth. 5. Mercurial purgatives: as calomel, blue-pill, quicksilver with chalk. In the administration of purgatives, regard should be had to the particular portion of the alimentary canal which is to be more immediately acted upon, as well as to the manner in which the medicine effects its purpose. The above classification will serve as a guide for the precise degree of operation which it is desirable to produce.

PURL.—A beverage made as follows:—Put a quart of mild ale into a saucepan, add a tablespoonful of grated nutmeg, and place the mixture over a slow fire till it nearly boils. Mix a little cold ale with sugar to

taste, and add gradually, two eggs well beaten; then add the hot ale, stirring one way to prevent curdling; lastly, add a gill of whisky, or gin. Warm the whole again, and pour it from one vessel to another until it becomes smooth.

Mild ale, 1 quart; nutmeg, 1 tablespoonful; cold ale and sugar, sufficient; eggs, 2; whisky or gin, 1 gill.

PURSE.—A receptacle for money usually carried about the person; purses are made of different shapes, and of various materials: when long purses are used, the end which holds silver, and that for gold should be distinguished severally by a white and yellow tassel, to prevent the coins being paid away in mistake. The recently introduced portemonnaie, is, however, now more generally employed as a purse than any other form; in using these, the gold should be kept in a compartment by itself. Persons should also be careful not to open their portemonnaies ostentatiously, and so discover the contents, as this is apt to excite the cupidity of dishonest persons, and lead to robbery.

PUT.—A game of cards, played with the entire pack, generally by two, but sometimes by four persons. At this game, the cards have a different value from all others. The best card in the pack is a three, the next a two, then come in rotation, as at other games, the ace, king, queen, knave, ten, &c. The dealer distributes three cards to each player, by one at a time: whoever cuts the lowest card has the deal, and five points make the game, except when both parties say "I put," for the score is at an end, and the contest is determined in favour of that party who may win two tricks out of three. When it happens that each player has won a trick, and the third is a tie, that is, covered by a card of equal value, the whole goes for nothing, and the game must begin anew. *Two-handed put.* The eldest hand should play a card; and whether the adversary pass it, win it, or tie it, you have a right either to say "I put," or to place your card on the pack. If you accept the first, and your opponent declines the challenge, you score one; if you prefer the latter, your adversary gains a point; but if before he play your opponent says "I put," and you do not choose to call, he is entitled to add one to his score. It is sometimes good play to say "I put" before you play a card; this depends on the nature of your hand. *Four-handed put.* Each player has a partner, and when three cards are dealt to each, one of the players gives his partner his best card, and throws the other two away; the dealer is at liberty to do the same to his partner, and *vice versa*. The two persons who have received their partners' cards, play the game, previously discarding their worst card for the one they have received from their partners. The game then proceeds in the same manner as two-handed put. *The laws of put are:*—1. When the dealer accidentally discovers any of his adversary's cards, the adversary may demand a new deal. 2. When the dealer discovers any of

his own cards in dealing, he must abide by the deal. 3. When a faced card is covered during the deal, the cards must be re-shuffled and dealt again. 4. If the dealer gives his adversary more cards than are necessary, the adversary may call a fresh deal, or suffer the dealer to draw the extra cards from his hand. 5. If the dealer gives himself more cards than are his due, the adversary may add a point to his game, and call a fresh deal, or he may draw the extra cards from the dealer's hand. 6. Either party saying "I put," that is, I play, cannot retract, but must abide the event of the game or pay the stakes.

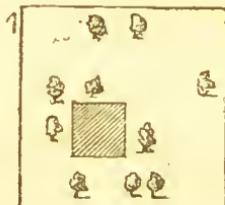
PUTRID FEVER.—See *TYPHUS*.

PUTTY.—A substance made by mixing whiting with drying oil till a thick paste is produced. It is used to fix panes of glass in sashes, to fill holes and cracks in wood before painting it, &c. It is sometimes, found difficult to remove hardened putty from what it adheres to; the best plan is to dip a small brush in a little nitric or muriatic acid, and go over the putty with it. Let it remain for a time, and it will become sufficiently soft to be removed with ease.

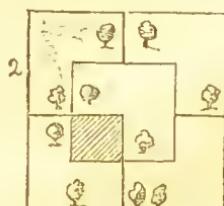
PUZZLES.—These form good and improving pastimes for the winter months or wet evenings when more invigorating exercise may be unobtainable. The best of these are as follows:—

The Garden Puzzle.

A gentleman had a garden, wherein grew ten apple trees, placed as shown in the diagram, fig. 1. He wished to divide these



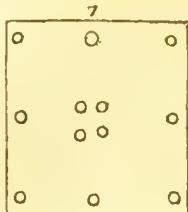
among his five sons, giving to each an equal share of the garden, the arbour being for the use of all. How did he do this? The answer is given in fig. 2.



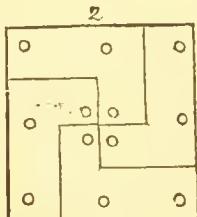
The Circle Puzzle.

Take a sheet of paper, parchment, or card-board, of the size and shape of the diagram,

fig. 1, and mark twelve holes or circles in the places shown. The puzzle consists in



dividing the paper into four pieces of equal size and shape, each piece to contain three circles. *Fig. 2* gives the solution.



To Guess a Number out of several others.

This is a most mystifying puzzle. You tell a person to write down, without your seeing them, several figures in a row, thus—

9 7 6 8 4 5 8

to add them together; to set down their total under the right hand figures as in a subtraction sum; and to subtract that total from the upper line, thus—

$$\begin{array}{r}
 9 & 7 & 6 & 8 & 4 & 5 & 8 \\
 & & & & 4 & 7 \\
 \hline
 9 & 7 & 6 & 8 & 4 & 1 & 1
 \end{array}$$

Then desire the person to mark out any one of the lower row of figures, and if he, or she, will tell you what figures are left, you will name the one scratched out. The explanation is this:—It is a singular property of the figure 9, that any row of figures if added together as above, and the sum subtracted, will continue to yield a sum which may be divided exactly into a certain number of nines. The sum will be either 18, 27, 36, 45, or a similar one. So that when you are told what the remaining figures of the sum are, say,

4 6 7 8 2 3

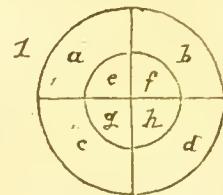
which make 30, you may be sure that the figure 6 has been scratched out.

The Upholstress Puzzle.

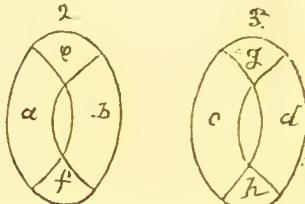
An upholstress had a circular piece of velvet, with which to cover two oval stools. The area of these stools together, exclusive of the hand-holes in their centre, was just equal to that of the piece of velvet. How must she cut the material so as to make it exactly suffice for the purpose?

Answer.

She must find the centre of the circle, and strike a second circle within it, half the diameter of the first, and having the same centre. Then she must cut the whole into four parts, as shown in *fig. 1*. Then cut



along the inner circle, and put the pieces together as shown in *figs. 2, 3*.



PYROLIGNEOUS ACID.—An impure acetic acid obtained by the distinctive distillation of wood in close vessels. Its acid powers are superior to those of the best household vinegar, in the proportion of three to two. By re-distillation, saturation with quicklime, evaporation of the liquid acetate to dryness, and conversion into acetate of soda by sulphate of soda, the empyreumatic matter is so completely dissipated, that on decomposing the pure acetate of soda by sulphuric acid, a perfectly colourless and pungent vinegar rises in distillation. Its strength will be proportioned to the concentration of the decomposing acid.

PYROSIS, OR WATER-BRASH.—This is a peculiar condition of the stomach that can hardly be called an inflammatory action, as the attack comes on periodically, and when relieved by vomiting, seems to be at an end till, after several hours, the same chain of phenomena occurs again. Water-brash usually attacks persons of, or past mid-life, and more generally females than males. It commences with a sense of heat, pain and constriction of the stomach, ending after an hour or more of suffering in nausea and vomiting, the stomach ejecting a small quantity of clear cool water, after which the distressing symptoms cease, but only to return in four, five, or six hours, perhaps longer. The treatment of this unpleasant affection is generally very easy; ten or fifteen drops of laudanum in a little water, once or twice repeated, will subdue the half-irritated half-inflammatory state of the stomach, when fifteen grains of carbonate of potass, dissolved in water, or ten grains of dried carbonate of soda will correct the unhealthy state of the gastric juice; while

as a tonic to guard against a repetition, five grains of the oxide of bismuth taken three times a day, will generally be found sufficient. In long standing cases, or where the symptoms are unusually distressing, the dose of laudanum should be followed by two leeches on the pit of the stomach, or else a blister the size of a crown piece laid on the same place, and one of the subjoined pills taken every six hours. Take of

Dried carbonate of soda . . . 20 grains
Ginger, rhubarb, and colombo
in powder, of each . . . 3 grains

Mix, and make into a mass with the extract of gentian, and divide into six pills. Should this means fail, five grains of oxide of bismuth may be taken three times a day, and two tablespoonfuls of the following tonic mixture every six hours. Take of

Quassia 20 grains
Cascara 2 drachms
Cloves 5 grains

Infuse in half a pint—ten ounces—of boiling water for six hours, strain, and add

Nitric acid 15 drops

Mix. In general, however, a dose of laudanum, the simple potass or dried soda, with the daily use of the dinner pill prescribed under the article PILL, will be found sufficient to subdue the painful symptoms, and cure this distressing affection of the stomach.

PYROTECHNY.—See FIREWORKS.

Q.

QUACKERY.—A term commonly applied to empiricism in the art of healing. The evils of quackery are manifold, and they may all be traced to ignorance and credulity. In order to win over the public, the quack puts forth some specific which professedly cures a great number of diseases. But inasmuch as different diseases require different modes of treatment, the panacea which the pretender extols so highly, becomes self-convicted as an absurdity, is opposed to experience, and repugnant to common sense. Notwithstanding this, however, it is certain that a large number of persons do patronize quack medicines, and with what result, it is easy to conceive. In the majority of cases where quack medicines are resorted to, the sufferer not only fails to find relief, but aggravates it, or induces some other complaint, probably more painful and difficult to cure. Many of the deluded victims of quackery, are doubtless persons who have been martyrs to some long-standing complaint, and have probably been under the treatment of properly qualified persons, and have tried every approved remedy, but without any successful result. Despair and doubt seize their mind, the advertisement of a quack meets their eyes,

and they resolve, as a forlorn hope, to have recourse to the nostrum. Now the reasonable view to take of quackery is this, if persons who are specially educated for the medical profession are unable, by the exercise of their art and judgment, to cure certain diseases, such power cannot be vested in the hands of ignorant persons, who are not only profoundly ignorant of the diagnosis of disease, but are almost equally unacquainted with the properties of the very drugs they tamper with.

QUADRILLE.—A game of cards, played by four persons. The number of cards required are forty; the four tens, nines, and eights being discarded from the pack. The deal is made by distributing the cards to each player, three at a time for two rounds, and four at a time for one round, commencing with the right-hand player, who holds eldest hand. The trump is made by the person who plays, with or without calling, by naming spades, clubs, diamonds, or hearts, and the suit so named becomes trumps. The following tables will show the rank and order of the cards, when trumps, or when not so:—

RANK AND ORDER OF THE CARDS WHEN TRUMPS.

<i>Clubs and Spades.</i>	<i>Hearts and Diamonds.</i>
Spadille, the ace of spades.	Spadille, the ace of spades.
Manille, the deuce of spades, or of clubs.	Manille, the seven of hearts or of diamonds.
Basto, the ace of clubs.	Basto, the ace of clubs.
King . . . Six.	Punto, the ace of hearts or of diamonds.
Queen . . . Five.	King . . . Three.
Knave . . . Four.	Queen . . . Four.
Seven . . . Three.	Knave . . . Five.
11 in all.	Deuce . . . Six.
	12 in all.

RANK AND ORDER OF THE CARDS WHEN NOT TRUMPS.

<i>Clubs and Spades.</i>	<i>Hearts and Diamonds.</i>
King . . . Five.	King . . . Three.
Queen . . . Four.	Queen . . . Four.
Knave . . . Three.	Knave . . . Five.
Seven . . . Deuce.	Ace . . . Six.
Six.	Deuce . . . Seven.
9 in all.	10 in all.

From these tables it will be observed that spadille and basto are always trumps: and that the red suits have one trump more than the black. There is a trump between spadille and basto, which is called manille, and is in black the deuce, and in red the seven; they are the second cards when trumps, and the last in their respective suits when not trumps. Punto is the ace of hearts or of diamonds, which are above the king, and the fourth trump when either of those suits are trumps, but are below the knave and ace of diamonds or hearts, when they are not trumps. The two of hearts or diamonds is

always superior to the three; the three to the four; the four to the five, and the five to the six; the six is only superior to the seven when it is not trumps, for when the seven is manille, it is the second trump. There are three matadores, namely, spadille, manille, and basto; the privilege accorded to these cards is, that when the player has no other trumps but them, and trumps are led, he is not obliged to play them, but may play what card he thinks proper; provided, however, that the trump led is of inferior value; but, if spadille should be led, he that has manille or basto only is compelled to lead it, which is the case with basto in respect to manille, the superior matadore always facing the inferior. Terms used in quadrille:—To ask leave is to request to play with a partner by calling a king. *Basto* is a penalty incurred by not winning when you stand your game, or by renouncing; in which cases you pay as many counters as are down. *Cheville* is being between the eldest hand and the dealer. *Codille* is when those who defend the pool make more tricks than those who defend the game. *Consolation* is a claim to the game, always paid by those who lose, whether by codille or demise. *Devole* is when he who stands the game makes no tricks. *Double* is to play for double stakes, with regard to the game, the consolation, the sans prendre, the matadores, and the devole. *Forced spadille* is, when all have passed, he who has spadille is then obliged to play it. *Foreed sans prendre* is, when having asked leave, one of the players offers to play alone, in which case you are obliged to play alone, or pass. *Friend* is the player who has the king called. *Impasse*: to make the impasse is, when, being in cheville, the knave of a suit is played, of which the player has the king. *Marks*, fish counters put down by the dealer. *Mille*, a mark of ivory, which stands for ten fish. *Ombre* is the name given to him who stands the game, by calling or playing sans appeler, or sans prendre. *Party* is the duration of the game, according to the number of tours agreed to be played. *Pass* is the term used when you have not either a hand to play alone, or with calling a king. *Pool*. The pool consists of the fishes, which are staked for the deals, or the counters put down by the players, or the basts which go to the game. To defend the pool is to be against him who stands the game. *Prise* is the number of fish or counters given to each player at the commencement of the game. *Règle* is the order to be observed at the game. *Remise* is, when they who stand the game do not make more tricks than they who defend the pool, then they lose by remise. *Reprise* is synonymous with party. *Roi rendu* is the king surrendered when called, and given to the ombre, for which he pays a fish; in which case the person to whom the game is given up must win the game alone. *Sans appeler* is playing without calling a king. *Sans prendre* is erroneously used for sans appeler, meaning the same. *Tenace* is to wait with two trumps that must make when he who has two others is obliged to lead, such as the two black aces against manille or punto. *Tours* are the counters, which

they who win put down to make the number of coups played. *Vole* is to get all the tricks, either with a friend or alone, sans prendre, or declared at the commencement of the deal. *Laws of quadrille*. 1. The cards are to be dealt in fours and threes, and in no other manner. The dealer is at liberty to begin by either four or three. If in dealing there is a faced card, there must be a new deal, unless it is the last card. 2. He who has asked leave is obliged to play. 3. If a person play out of his turn, the card played may be called at any time in that deal, provided it does not cause a revoke; or either of the adversaries may demand the partner of him who played out of his turn, or his own partner, to play any suit he thinks fit. 4. No matadore can be forced but by a superior card; but the superior forces the inferior when led by the first player. 5. Whoever names any suit for trumps must abide by it, even though it should happen to be his worst suit. 6. If you play sans prendre or have matadores, you are to demand them before the next dealer has finished his deal, otherwise you lose the benefit. 7. If any one names his trump without asking leave, he must play alone, unless the youngest hand and the rest have passed. 8. If the person who won the sixth trick plays the seventh card, he must play the vole. 9. If you have four kings, you may call a queen to one of your kings; but you must not call the queen of trumps. 10. If a card is separated from the rest, and it is seen, it must be played, unless the person who separated it plays sans prendre. 11. If the king called, or his partner plays out of his turn, no vole can be played. 12. No one is to be basted for a renounce, unless the trick is turned and quitted; and if any person renounces, and it is discovered, if the player should happen to be basted by such renounce, all the parties are to take up their cards and play them over again. 13. Forced spadille is not obliged to make three tricks. 14. The person who undertakes to play the vole has the preference of playing before him who offers to play sans prendre. 15. The player is entitled to win who has his king called before he declares for the vole. 16. When six tricks are won, the winner of the sixth must say, "I play," or "do not play, the vole;" or "I ask;" and no more. 17. He who has passed once has nought to play after, unless he has spadille; and he who asks must play, unless somebody else plays sans prendre. 18. If the players show their cards before they have won six tricks, they may be called. 19. Whoever has asked leave cannot play sans prendre, unless he is forced. 20. Any person may look at the tricks when he is to lead. 21. Whoever, playing for a vole, loses it, has a right to stakes, sans prendre, and matadores. 22. Forced spadille cannot play for the vole. 23. If any person discovers his game, he cannot play the vole. 24. No one is to declare how many trumps are out. 25. He who plays and does not win three tricks is basted alone, unless forced spadille. 26. If there are two cards of a sort, it is a void deal, if discovered before the deal is played out.

QUADRILLES.—Dances in which four couples or eight persons are engaged, a couple standing on each side of a square. The lady is always placed on the gentleman's right. There are many sets of quadrilles, the figures in each varying from the others, but in by far the greater number of instances one set is adhered to, which is termed Payne's first set. This set consists of four figures and a finale. The couples at top and bottom first perform a figure; then it is performed by the others, and so on. *Le Pantalon.*—First right and left, set and turn partners; ladies' chain, which is performed by the two ladies giving their right hands to each other, and changing places; then their left hands to the gentleman, and turn round; and the same back again to places. Now promenade (each couple holding hands crossed) to the opposite side; then half right and left back to places. *L'Eté.*—The first lady and opposite gentleman advance and retire, dance to the right, then to the left, cross over, lady and gentleman changing places. Dance to the right and the left, cross again to their own places, and turn their partners. The second lady and the first gentleman do the same. *La Poule.*—The first lady and opposite gentleman cross over, giving their right hands; back again, giving their left and their right to their partners, and set, forming a line; promenade to opposite places. The two who began, advance and retire; advance a second time; the lady curtseys, and the gentleman bows, and return. The two couples advance and retire, half right and left to their original places. *La Trenise.*—Ladies' chain; set, and turn partners; first couple advance and retire; advance again; the gentleman returns, leaving the lady on the left of the opposite gentleman; the two ladies pass or cross to the opposite side, changing to opposite corners, during which the gentleman passes between them, and sets. The ladies cross over again, and pass to opposite corners, while the gentleman returns to his place, and sets. The first couple set and turn. During these performances the gentleman at the bottom of the dance stands still. The movement being finished, a similar figure is performed by himself and partner. *La Finale.*—All eight dance or chassé across, changing places with their partners, and set at the corners; back again to places, and set. After this, *L'Eté* is danced, concluding with chassé across. This finale is danced another way. All eight promenade round the room, to their own places. The first and second couple advance and retire; advance again, chaining partners, and promenade. This is called the galopade finale.—See CALEDONIAN QUADRILLES, LANCERS QUADRILLES, &c.

QUAIL.—A bird, native of the East, which migrates from warmer to colder regions. They are naturalized and bred in England, changing their residence in it, on the approach of winter, from the more exposed to the more temperate districts. Although the quail is not domesticated with us, there is no difficulty in rearing and preserving it

in the same manner as the partridge and the pheasant.



QUAILS BROILED.—Singe and draw them, and split them down the back; put them into a stewpan with a little salad oil, two or three bay leaves, and a seasoning of salt and pepper; cover them with slices of bacon, stew them over a slow fire for about a quarter of an hour; then take them out, cover them with bread crumbs, and broil; serve them with the sauce in which they have been dressed, which must be strained and boiled up.

QUAILS ROAST.—Having cleaned them, cover them with slices of bacon, and roast as directed for partridge, basting well at first with butter; serve with a piquant sauce.

QUAILS STEWED.—Place them in a stewpan with a slice of veal, three or four rashers of bacon, a little butter, salt, pepper, a little stock or good gravy, and a gill of white wine; stew over a slow fire for half an hour; then take them out, strain the liquor, and serve over the birds. Or, singe and draw the quails, and put them into a stewpan with a little gravy, a glass of white wine, some stock, parsley, and green onions, a bay leaf, and a few cloves; stew for half an hour, and serve, garnishing the dish with toasted bread.

QUAKING PUDDING.—Scald a quart of cream; when almost cold, put to it four eggs well beaten, and a spoonful and a half of flour, with nutmeg and sugar. Tie it close in a buttered cloth, boil it for an hour, and turn it out carefully without cracking it. Serve it with melted butter, a little wine, and sugar.

QUARRIES.—A species of paving tile manufactured in Staffordshire, and formed of small squares six inches on the side, coloured blue, red, drab, and black. These, if properly arranged, make beautiful floors, and pathways for hothouses, gardens, &c.

QUARTER DAYS.—Four days in the year, upon which, by common consent, certain obligations are discharged, and pecuniary engagements fulfilled. These days

are especially set aside for the payment of rent, taxes, &c. They are Lady Day, the 25th of March; Midsummer Day, the 24th of June; Michaelmas Day, the 29th of September; and Christmas Day, the 25th of December.

QUEEN CAKES. — Wash a pound of butter in a little orange-flower water, beat it to a cream with a large wooden spoon, a pound of finely powdered loaf sugar, a pound of flour, dried and sifted, three-quarters of a pound of currants, eight eggs well beaten, a little grated nutmeg, and two ounces of bitter almonds pounded; add the sugar to the butter, put in the eggs by degrees, and then the flour and the other ingredients, adding last of all a wineglassful of brandy; beat the whole well together for an hour, and bake it in small buttered tins in a brisk oven.

Quince Butter. — Butter, 1lb.; orange-flower water, sufficient; sugar, 1lb.; flour, 1lb.; currants, 1lb.; eggs, 8; nutmeg, to flavour; bitter almonds, 2ozs.; brandy, 1 wineglassful.

QUICKLIME. — See LIME.

QUICKSILVER. — See MERCURY.

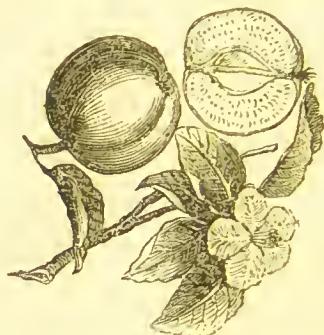
QUILLS, TO PREPARE. — Immerse the quill, when plucked from the wing, in water almost boiling; leave it there till it becomes sufficiently soft; compress it, turning it on its axis with the back or blade of a knife. The immersion and compression must be continued till the quill is clear. When cold, and the membrane and greasy covering are entirely removed, it is immersed a last time to render it cylindricall, which is done by whirling it between the thumb and forefinger; it is then dried in a gentle tem-perature.

QUINCE BLANC MANGE. — Dissolve in a pint of prepared juice of quinces an ounce of the best isinglass; add ten ounces of sugar, roughly pounded, and stir these together gently over a clear fire, from twenty to thirty minutes, or until the juice forms into a jelly as it falls from the spoon. Remove the scum carefully, and pour the boiling jelly gradually to half a pint of thick cream, stirring them briskly together as they are mixed; they must be stirred until very nearly cold, and then poured into a mould which has been rubbed in every part with the smallest possible quantity of very pure salad oil, or, if more convenient, into one that has been dipped into cold water. This jelly, if carefully made, and with ripe quinees, is one of the most richly-flavoured preparations of fruit it is possible to imagine.

Quince Juice. — Juice of quinces, 1 pint; isinglass, 1oz.; sugar, 10ozs.; cream, $\frac{1}{4}$ pint.

QUINCE, CULTURE OF. — The quince is a fruit somewhat resembling the apple, but of a peculiar flavour. The trees may be raised from seed sown in autumn, but there is no certainty of having the same, or any good fruit from the seedlings. The several varieties may be propagated by cuttings and layers; also by suckers from such trees as grow upon their own roots, and by grafting and budding upon their own or pear stocks. Cuttings, layers, and suckers may be planted in autumn, winter, or early

spring. Choose young wood for the cuttings and layers. They will be rooted by next autumn; then transplant into nursery rows two feet asunder; plant the suckers also at the same distanee, and train the whole for the purposess intended; if for standards with a stem, to any desired height from three to six feet; then encourage them to branch out at top, to form a head; those designed for dwarfs must be headed near the ground, and trained accordingly for espaliers or dwarf standards. When they have formed tolerable heads, plant them out finally. Standard quincees, designed as fruit-trees, may be stationed in the garden or orchard, and some by the side of any water in bye-places, sufferling the whole to take their own natural growth. And as espaliers, they may be arranged with other



moderate growing trees, about fifteen feet apart. The fruit should be gathered early in November, choosing a dry day, bruising them as little as possible, and then placing them thinly on the shelves of the fruit room, or in any other cool place; examine them frequently, and remove all such as appear to be beginning to decay, as they are subjeot to the attacks of a minute fungue, wchich, if not checked, would speedily spread over the whole stock.

QUINCE JELLY. — Pare, core, and quarter some ripe but perfectly sound quincees, as quickly as possible, and throw them as they are done into part of the water in whielh they are to be boiled, allow one pint of this to each pound of the fruit, and simmer it gently until it is a little broken, but not so long as to redden the juice, whieh ought to be very pale. Turn the whole into a jelly-bag, or strain the liquid through a fine cloth, and let it drain very closely from it, but without the slightest pressure. Weigh the juice, put it into a very clean preserving pan, and boil it quickly for twenty minutes; take it from the fire, and stir in it, until it is entirely dissolved, twelve ounces of sugar for each pound of juice, or fourteen ounces, if the fruit should be very acid; keep it constantly stirred, and thoroughly cleared from scum from ten to twenty minutes longer, or until it jellies strongly in falling from the skimmer; then pour it directly into glasses or moulds. If properly made, it will be sufficiently firm to turn out of the

latter, and it will be beautifully transparent and rich in flavour. It may be made with an equal weight of juice and sugar, mixed together in the first instance, and boiled from twenty to thirty minutes.

To each pound of quinces, 1 pint of water; to each pound of juice, 12ozs. sugar; or, Juice and sugar, equal weight.

QUINCE JUICE.—Pour into a clean earthen pan two quarts of spring water, and throw into it, as quickly as they can be pared, quartered, and weighed, four pounds of quinces. When all are done, stew them gently, until they are well broken, but not quite reduced to a pulp; turn them into a jelly-hag, or strain the juice from them, without pressure, through a closely-woven cloth, which should be gathered over the fruit and tied, and suspended above a deep pan until the juice ceases to drop from it: this, if not very clear, must be rendered so before it is used for syrup or jelly; but for all other purposes, once straining it will be sufficient.

QUINCE MARMALADE.—Pare and quarter some quinces, and weigh an equal quantity of sugar. To four pounds of the latter put a quart of water, boil and skim it well, during the time the quinces are being prepared. Lay the fruit in a stone jar, with a teacupful of water at the bottom, and pack them with a little sugar strewn between. Cover the jar close, set it in a cool oven, or on a stove, and let the quinces soften till they become red. Then pour the syrup and a quart of quince juice into a preserving pan, and boil all together till the marmalade be completed, breaking the lumps of fruit with the ladle: otherwise the fruit is so hard that it will require a great deal of time.

QUINCE PIE.—Pare, cut, and core sufficient quinces to fill the dish, put a small cup in the centre, add one clove to every three quinces, a pint of powdered cinnamon, a small piece of chopped lemon-peel, and sugar; bake according to size.

QUINCE PRESERVED.—Pare and core some quinces, and cut them into quarters or little round slices, put them into a preserving pan, and cover them with the parings and a very little water. Cover them close, to keep in the steam, and boil them till they are tender. Take out the quinces, and strain the liquor through a bag. To every pint of liquor allow a pound of loaf sugar; boil the juice and the sugar together for about ten minutes, skimming it well; then put in the quinces, and boil them gently for twenty minutes. When the sugar seems to have completely penetrated them, take them out, put them in a glass jar, and pour the juice over them warm. Tie them up when cold with handied paper, and set them by in a cool dry place.

QUINCE PUDDING.—Scald six large quinces till they hecome very tender, pare off the thin rind, and scrape them to a palp Add powdered sugar enough to make them very sweet, and a little pounded ginger and

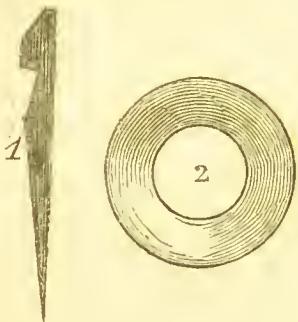
cinnamon. Beat up the yolks of four eggs with some salt, and stir in a pint of cream; mix them with the quinces, and bake it in a dish, with a puff crust round the edge.

QUINCE WINE.—This wine is made from very ripe quinces. When gathered, they must be thoroughly wiped and pared; then slice the quinces lengthwise, and remove cores, bruising them thoroughly in a mashing-tuh with a pestle. Strain off the liquid part, by pressing the pulp in a hair hag; warm this liquor over the fire, and skim it, but do not allow it to boil. Sprinkle into it some powdered loaf sugar, then, in a gallon of water and a quart of wine, boil twelve or fourteen large quinces thinly sliced; add two pounds of fine sugar, and then strain off the liquid part, and mix it with the natural juice of the quinces; put this into a cask, and mix the whole well together, then let it settle; put in two or three whites of eggs, and afterwards draw it off. To make it still better, add a quarter of a pound of stoned raisins, and half an ounce of cinnamon to a quart of liquor, to the consumption of a third part, and put it into the cask when the wine is fermenting.

QUINZE.—A game of cards usually played by two persons only; it is much admired for its simplicity and fairness, as it depends entirely upon chance, is soon decided, and does not require the attention which most other games do. It is, therefore, particularly calculated for those who are fond of the sport upon an equal chance. The name of quinze means fifteen, that being the number of the game, which must be made as follows:—1. The cards must be shuffled by the two players, and when they have cut for deal, which falls to the lot of him who cuts the lowest, the dealer has the liberty to shuffle them again. 2. After the cards are shuffled, the adversary cuts them: the dealer then gives one card to his opponent and one to himself. 3. Should the dealer's adversary not approve of his card, he is entitled to have as many cards given to him, one after the other, as will make fifteen, or come nearest to that number; which are usually given from the top of the pack: for example, if he should have a deuce and draw a five, which amounts to seven, he must continue going on, in expectation of coming nearer to fifteen. If he draw an eight, which will make just fifteen, he, as being eldest hand, is sure of winning the game. But if he overdraw himself, and make more than fifteen, he loses, unless the dealer should happen to do the same; which circumstance constitutes a drawn game; and the stakes are consequently doubled. In this manner the players persevere until one of them has won the game, by standing and being nearest to fifteen. 4. At the end of each game, the cards are packed and shuffled, and the players again cut for deal. 5. The advantage is invariably on the side of the elder hand.

QUOITS.—An excellent game affording healthy exercise to the players. To play at quoits an iron pin, fig. 1, called a hoh, is driven into the ground to within a few inches of the top, and at the distance of

eighteen or twenty yards, as may be agreed upon; a second pin of iron is also fixed. The players are generally divided into parties, and each one pitches a quoit, *fig. 2*, from hob to hob; those who pitch the nearest reckoning towards the game. But the determination is indiscriminately marked; for instance, if a quoit belonging to A lies nearest to the hob, and a quoit belonging to B lies secoud, A can claim but one towards the game, though all his other quoits lie nearer to the mark than all the other quoits of B, because one quoit of B being the second nearest to the hob "euts out," as it is called, all behind it; if no such quoit had interfered, then A would



have reckoned all his as one each. Having cast all their quoits, the players walk to the opposite end, and determine the state of the play; then, taking their stand there, throw their quoits back again, and continue to do so alternately as long as the game remains undecided. A quoit that falls with its flat side upwards does not count. The quoit should be delivered from the hand by an upward and forward pitch with a steady aim at the pin, near which it should sink with its sharp edge in the turf. The dress in quoits should be loose and easy, with no restraint from braces.

R.

RABBIT BOILED.—Wash the rabbit thoroughly, truss it firmly with the head turned and skewered to the sides, put it into sufficient boiling water to keep it quite covered until it is cooked, simmer it gently for thirty or forty minutes; when very young they will require less time than this. Cover it with rich white sauce, mix it with the liver parboiled, finely pounded, and well seasoned with eayenne and lemon-juice; or serve with onion sauce.

RABBIT COLD, TO DRESS.—Cut the rabbit into quarters, beat up one or two eggs, according to the quantity dressed, with a little grated nutmeg, pepper and salt, some parsley minced fine, and a few bread crumbs; mix them well together, and

cover the rabbit with this batter; broil it, or put it into a Dutche oven, or have ready some hot dripping in a pan, in which fry the rabbit to a light brown colour; thicken a little gravy with some flour, flavour with mushroom ketchup, and serve.

RABBIT CURRIED.—Cut up a rabbit into rather small pieces, splitting the head in half, cut two large onions and one apple into very small dice, and fry them in a stewpan with two ounces of butter; when nicely browned, add a tablespoonful of curry powder, a teaspoonful of flour, and a pint of stock; mix the whole well together, then put on the rabbit with half a pound of streaked bacon cut into small square pieces; let the whole stew very gently upon a very slow fire, for three-quarters of an hour; when done, which may be ascertained by trying with the point of a knife if the flesh will leave the bone easily, pour off as much of the fat as possible, and turn the rabbit out upon a dish; serve with rice separately.

RABBIT FRICASSEED.—Wash a young rabbit thoroughly, and cut it into joints, put it into a stewpan with a quarter of a pound of streaked bacon cut small, an onion stucck with cloves, a bunch of herbs, a blade of mace, and some salt; cover the whole with water, and let it simmer for twenty minutes, keeping it well skimmed; pass the liquor through a sieve. Into another stewpan put two ounces of butter, a tablespoonful of flour, and a little of the liquor; set it on the fire, and stir it well till it boils; add the rabbit and bacon with a dozen and a half of small onions, let the whole simmer until the onions are done; skim well; then pour in a wineglassfull of white wine mixed with the yolks of two eggs and a little grated nutmeg; leave it to thicken, remove the rabbit, pile it on sippets, pour sauce over it, garnish with sliced lemon, and serve hot.

RABBIT FRIED.—Cut a rabbit into joints, dip them into beaten egg, and then into fine bread crumbs, season with salt and pepper, and when all are ready, fry them in butter over a moderate fire for twelve or fifteen minutes; simmer two or three strips of lemon-peel in a little gravy until it is well flavoured with it; boil the liver of the rabbit for five minutes, let it cool, and then mince it; thicken the gravy with an ounce of butter, and a small teaspoonful of flour, add the liver, give the sauce a minute's boil, stir in two tablespoonsfuls of cream and a small quantity of lemon-juice; dish the rabbit, pour the sauce under it, and serve it quickly.

RABBIT GIBELLOTTE.—Cut up a rabbit and put into a saucēpan with butter, add small slices of bacon, and brown it; then take it out of the saucēpan for a few minutes, and put in a tablespoonful of flour, which is to be lightly browned; put back the rabbit and the bacon, add a little stock and a small quantity of white wine, some chopped mushrooms and sweet herbs; stew, and about a quarter of an hour before it is done, add several small sized onions, previously browned in butter.

RABBIT HASHED.—Cut the rahhit into joints, put the trimmings into a stewpan with a quart of the liquor it has been boiled in, and a large onion cut into quarters; let it boil for half an hour; strain it through a sieve; then put two tablespoonyfuls of flour into a hasin, and mix it well by degrees with the hot broth; set it on the fire to boil up, then strain it through a fine sieve, wash out the stewpan, lay the poultry in it, and pour the gravy on it; set it by the side of the fire to simmer very gently for fifteen minutes; five minutes before it is served up, cut the stuffing into slices, and put it in to warm, then take it out and lay it round the edge of the dish, and put the poultry in the middle; carefully skim the fat off the gravy, then shake it round well in the stewpan and pour it to the hash. The dish may also be garnished with sippets of toasted bread.

RABBIT MUMBLED.—Boil a rabbit well, but not too much, remove the flesh and chop it up fine; then add nutmeg, salt, lemon-peel, and the juice of a lemu. Put whole into a stewpan with twelve eggs and three-quarters of a pound of butter; stir it well, and serve in a dish with sippets.

RABBIT PATTIES.—Mince the best parts of a cold roast rabbit into small pieces, with a little finely shred mutton suet. Make a gravy from the bones and skins, or use any other good gravy; thicken it with butter and flour, and season with salt, cayenne, pepper, nutmeg, mace, half a lemon grated, and a very little red wine. Stew the mince, fill patty-pans with it, and bake in a moderate oven.

RABBIT PIE.—Cut a rabbit into joints, splitting the head in half, and lay them in lukewarm water for half an hour; then dry them upon a cloth, season well with pepper and salt, and with chopped shalots, parsley, two bay leaves, and a teaspoonful of flour; cut three-quarters of a pound of streaked bacon into square pieces, lay in the pieces of rahhit and bacon together, in a pie dish, pour in a little water, cover with paste, and bake in a moderate oven.

RABBIT PUDDING.—Wash a rabbit thoroughly, remove the head, and cut the body into small pieces; make a light suet paste, allowing a quarter of a pound of fresh beef or veal suet finely minced, to a pound of flour; season the rahhit with pepper and salt, and a little mushroom powder, line a dish with the paste, put the rahhit in and boil it in a cloth for two hours and a half; serve it with gravy in a sauce-tureen. One or two slices of pickled pork, or streaked bacon, may be added.

RABBIT RAGOUT.—Half-roast a rahbit, cut it into joints, and stew it in good stock with a couple of onions, two dozen corns of allspice and black pepper, a few cloves, a piece of lemon-peel, and a couple of bay leaves. Skim the stew, and keeping the lid quite close, let it simmer for three-quarters of an hour. Strain off the gravy, leaving the rabbit in the stewpan to keep hot. Take off the surface of fat, which will soon form, and thicken the gravy with butter rolled in browned flour, until it is as stiff as

paneake batter. Add to it a glass of white wine and a little lemon-juice. Dish the rahbit, pour the sauce over it, garnish with fried bread, and serve.

RABBIT ROASTED.—Truss the rabbit, and stuff it with the liver minced raw and mixed with grated bread, ham, butter or suet, and chopped parsley, seasoned with a little lemon-thyme, grated nutmeg, salt, and pepper, and bound with heaten egg. Sew it up, set it down before a quick fire, and haste it with butter. Serve with gravy, or melted butter with lemon-juice in it.

RABBIT SOUP.—Take two full-grown or three young rahhits; cut them into joints, flour, and fry them lightly; add to them three onions of moderate size, also fried to a clear brown; on these pour gradually seven pints of boiling water, throw in a large teaspoonful of salt, clear off all the scum carefully as it rises, and then put to the soup a bunch of parsley, four medium-sized carrots, and a small teaspoonful of peppercorns; boil the whole very gently for five hours or five hours and a half; add more salt if needed, strain off the soup, let it cool sufficiently for the fat to be skimmed clear from it, heat it afresh, and send it to table with sippets of fried bread. Add a thickening of rice flour, or of wheaten flour browned in the oven and mixed with a spoonful or two of ketchup.

RABBIT STEWED.—Wash a rahhit thoroughly, let it lie for two or three hours in cold water, cut it into joints, dry them upon a cloth, dredge them with flour, fry them of a light brown with butter, and stew them in the following sauce: brown three ounces of butter in a stewpan, with a tablespoonyful of flour, a minced onion, some pepper and salt; add a pint of gravy and the rahhits, stew them till they are tender, and just previous to serving, stir in a tablespoonful of ketchup. When the rabbit is to be dressed with a white sauce, it should not be fried, but stewed in the white stock, which is seasoned with white pepper and salt, and thickened with a piece of butter mixed with flour. A few minutes before serving add a little cream, and a tablespoonful of lemon pickle.

RABBIT, TO CARVE.—See RABBIT.

RABBIT, TO CHOOSE.—A rahhit when old, has the haunches thick, the ears dry and tough, and the claws blunt and ragged. A young rabbit has claws smooth and sharp, ears that tear easily, and a narrow cleft in the lip.

RABBIT SHOOTING.—In some parts where the country is of a light sandy soil, rabbits are tolerably numerous, although not claimed as private property; and such a locality prevents a fair opportunity for the amusement of ferreting them, which, to be well done, must be performed quietly and adroitly. In the first place, the ferrets must be muzzled: thus unable to seize the rahbit by the throat, they are turned into the burrows. Attention must now be paid by the shooters, who stand at a moderate distance from the rabbit-holes, from whence they watch the bolting of the game from the different holes, out of which the ferrets

have driven the rabbits. Rabbit shooting on open warrens is, however, the most legitimate sport; and although the numbers here are not great, there is often sport enough to repay the search after them. In approaching these wary animals, a degree of caution is necessary, so as not to disturb them. It is well, therefore, never to advance in a straight line, or even look directly towards them; walk leisurely along in the face of the wind; stoop and pick up, or appear to pick up, a bough or piece of turf, or to examine any matter before you, and such conduct will often throw them off their guard. While doing this, if a dog is with you, keep him close; your clothes, also, should be dark, so as not to be seen on the approach a long way off. When you have ventured as near as they will allow without retreating to their earth, then stoop. When storms arise, the intervals between are often favourable for getting near rabbits, particularly when the wind blows from them to you. When a number are come upon suddenly at the edge of a wood frequented by them, it often happens that the old ones will immediately take the covert; but not so the young ones, who prick up their ears, and perhaps raise themselves up to examine you; now take your shot.

RABBIT SNARE. — Rabbits are frequently found to be mischievous animals by the farmer, costing him much trouble and expense. They may be caught by steel traps, by wire snares, and also by nets. The traps mostly used are either snares or steel traps. In order to trap the animals successfully, it is requisite to know something of their habits. They feed in the evening, and sleep in their "form" during the day: they are very active and playful during moonlight nights. Their running consists of a succession of leaps; and as they are very swift and strong, considerable strength is required in the traps that are to hold them. After a rainy night, they leave cover on account of the wet; the generality, under such circumstances, run the highways or stony lanes. When the ground is dry and the wind cold, rabbits then prefer the paths that are covered with leaves. In looking for a rabbit, much depends upon the season; if it be spring, she will be found upon the fallows or green corn; during the autumn, she will frequent the stubble and turnips; and in winter, she will not unfrequently sit near houses, in brambles or bushes of thorns. From the frequency with which the rabbit goes over the same ground, she establishes, both in cover and out of it, what is termed a "run," a beaten track, over which she is almost sure to pass within a short space of time. The run is distinguished by the leaves and grass being pressed down, by small brambles being turned aside, and in fallow grounds by a smoothness that is imparted to the surface and sometimes by the track of feet. It is in these runs that the traps should be set. The steel trap is constructed on the same principle as the "gin" used for rats, but is somewhat stronger in the spring. These

steel traps, of various sizes and degrees of strength, are sold by most ironmongers, and by dealers in agricultural implements. The steel trap is simply buried in the run, and leaves, grass, or earth strewn over its surface so as to give no appearance of an unusual character. It is unnecessary to bait the trap. Precaution should, however, be taken to tie the trap to a bough or peg in the ground, by a piece of strong string, otherwise the rabbit will carry away the trap. Wire snares are also very effective traps. They are made of fine copper wires, and being inexpensive, a number of them may be set where rabbits abound. The wires are made to form a running loop, just such as we form with string; only the wires are so arranged that they all unite to form the one loop. No ingenious person could fail to form the loop, after a few minutes' handling of the wire. It is so simple that it will suggest itself. The loop thus made, is set across a run, so that the top of the loop stands say about six inches from the ground; and in order to keep it in its proper position a peg of wood is driven in the ground a little way from the run, and in the top of the peg there is a slit which serves to catch the ends of the wires and hold them in position. The wires must be tied firmly at the end to a string, which may lie on the ground; the end of the string should be tied to a bough sufficiently high from the ground to yield a little when it is pulled. This yielding of the bough prevents the rabbit from snapping the string, which it would otherwise do in its endeavours to escape. Netting rabbits is effected by nets being placed across the runs, but it is very seldom resorted to, as it is less practicable than other methods. There is an ingenious mode of taking rabbits by single wires and what is called a springle, as seen in fig. 1. A strong and springy

Fig. 1.



stick (A), is stuck deep into the ground in an upright direction; its smaller end is then bent over, and also buried sufficiently in the ground to keep it down. To this end a wire (B) is tied by a short string, and when the rabbit is caught, his first jump pulls the end of the springle out of the soil, and it then lifts the rabbit completely from the ground, as seen in fig. 2, thereby depriving it of all power of escape. Rabbits are also caught with the aid of ferrets. A ferret being put into a hole, a square net, about a yard square, is then thrown over the mouth of the hole; the rabbit runs out with a jump, and is instantly entangled in the net, so that escape is impossible. This mode of netting is far easier and more expeditious than the loop netting, in which the net is made as a bag, drawn together by a running string, for this method gives considerable

trouble to get the rabbit out, whereas it is perfectly easy to take them from a square net. The form of trap called the "tipe" is only applicable to large warrens, or to places where rabbits so abound, as to make it a point of importance to reduce their numbers. A large pit is dug in the ground,

Fig. 2.



and over this a false surface, just like the ground, so evenly balanced by a hinge that the weight of a rabbit will turn it completely over. The trap being thus prepared, the door is kept fixed for a night or two, to give the rabbits confidence; then it is set free, and in this way large numbers of rabbits may be taken in a single night. The same modes here enumerated for the taking of rabbits are for the most part equally applicable to hares.

RABBITS, TO BREED AND REAR.—The breeding and rearing of rabbits not only affords an agreeable pastime for youth, but, owing to their amazing fecundity, renders the keeping of them in a tame state an object of some consequence in cottage economy. The rabbit litters seven times in the year, and generally produces eight young at a time. At the age of five months the animal begins to breed, but it is as well to defer it till nine. In choosing rabbits for stock, it will be found that those which are in colour nearest the wild ones, are in general the most hardy; after the black or black and white, then the white, then the sandy, and lastly the grey and white. The young fancier may either purchase a doe with young, or he may obtain four or five young ones. If the former, he should be guided in his selection by some experienced person; if the latter, he should take especial care that the young ones are in good health, and have no signs of pot-belly, and that they are of full size and strong build. The rule is to take the largest of the rabbits, where there are fewest in the litter. The rabbit-house should be dry and well ventilated. The huts, or hutches, should be placed on stands about three feet high, around the sides of the rabbit-house. Each hut intended for breeding should have two apartments, one for sleeping and one for eating. The floor of the hut should be planed smooth, that

the wet may run off: a common hoe with a short handle, and a small broom, are convenient for cleaning the hutches. The breeding-hutches should be about two feet high, two feet six inches deep, and four feet long; about one-third of this length should be separated by a panel arched doorway. Above this, there should be a sliding door, which can at any time be put down, so as to shut the doe into either of the compartments as occasion may require. The edges of the doorway should be cased with tin, as should also the edges of the feeding-trough, and any other part that the rabbit can get at with his teeth. The front of the hut has two doors, one of which, belonging to the inner apartment, is made of boards, and the other, belonging to the feeding-room, is open, having wirework in front; both these doors are fastened by buttons in front, but in a contrary direction. The bottom of the hut should have a long narrow piece of wood in front, below the wires, which should be moveable, and this, upon being removed, will permit an iron rod or scraper to be introduced, for cleansing the hut from time to time. In placing the hut upon the stand it should be placed a little askant backward, and there should be a few holes drilled at its back partition, for the purpose of letting all liquid pass off. Young persons should begin by keeping common rabbits, for which common hutches, such as they can construct themselves, if so inclined, will be quite good enough. When they have acquired experience in the management of the rabitry, and not before, they may, by degrees, introduce superior animals to their stock, and dispose of the common ones. The buck's hut must obviously be made different in every way from that of the doe. He should have a large roomy house with a partition, and a back apartment where he can retire when he pleases; for it is a great comfort to him to be able to hide himself, and to skip in and out of his little chambers. His hut ought also to be higher than that of the doe, and it should have a little trough for his dry victuals, and a little iron-wire rack on one side for his green food, if you wish to make him very comfortable. It is a bad plan to put hutches on the top of each other, and the buck's hut should always be kept out of sight of the doe. The feeding of rabbits is a most important point. On this mainly depends the prosperity and health of the stock. Rabbits should be fed three times a day; and the principal thing to be attended to is, always to give a good deal more dry than succulent food. Almost all the vegetables and roots used for the table may be given to rabbits; in preference to all others, celery, parsley, and the roots and tops of carrots; they also eat lettuce leaves with avidity, but these must be given sparingly; turnips, parsnips, and even potatoes in a raw state, may be occasionally given on an emergency, when better roots or good greens are scarce. In the spring time, tares form an excellent food for them, so that they are not wet; in fact, no greens ought to be given to rabbits when there is much moisture on the surface. It must be

mentioned that a doe will eat nearly twelve as mueli when suckling as at other times; and when her little oues begin to eat, the allowance of food must be gradually increased. The grain proper for rabbits are oats, peas, wheat, or buckwheat; to these, as the best kind of dry food, may be added bran, pollard, dry clover, peas and bean straw. Rabbits full grown, having as mueli corn as they can eat, can never take mueli harm from an abundant supply of vegetable food. But young rabbits ought to be carefully attended to in this respect; a very little vegetable food is the most proper, and that should be of the best kind, or they will soon die. The doe goes thirty or thirty-one days with young. The best breeding rabbits are those that kindle in March. Some days before this event takes place, hay should be given to the doe wherewithal to make her bed. This she speedily does, lining the nest for her forthcoming little ones. The litter should be reduced to five or six, by destroying the weak and sickly young ones so soon as their defects are perceived. If more than this number are left to be suckled, some will perhaps die, others be sickly, and none of them fine. The doe should not be disturbed by any other rabbit during the period of gestation, nor should she be handled by her keeper. Should she be weak after kindling, give her a malt mash, sealed fine pollard, or barley-meal, in which may be mixed a small quantity of cordial horse-ball. In this case, and in fact whenever a doe is weak, bread, soaked in milk and squeezed rather dry again, if she will take it, will considerably strengthen her. At the time of kindling, a little cold water should be placed conveniently in the hutch, as the animal appears to be much gratified by it. Rabbits are in perfection for eating when about nine months old, and should be put to fatten when they are about six. It requires about three months to make a rabbit thoroughly fat; half the time may make them eatable, but by no means equal in the quality of their flesh. They should be kept in a single hutch, and fed with oats, hay, cabbage, bran, and chicory. They may be also treated to a little barley-meal and a few peas; but they must be kept very clean and have plenty of air. No animal is less liable to disease than the rabbit, when carefully attended; but neglect and want of cleanliness, or improper food, produce in them many complaints, among the foremost of which is what is called "pot belly," and which is very common to young ones. It is generally occasioned by want of air and exercise, and the use of too large a quantity of green food. The remedy is dry food, and to let the rabbits run about in an open dry space every day. Rabbits are subject to colds and hoarseness, and have what is called "the snuffles." While this disease lasts they should be kept dry and warm, and be fed with barley-meal made into a paste with a little milk, and no water or green food should be given them till they recover. Squeezed tea-leaves generally restore a doe to health if weak or otherwise affected after kindling, if the food directed to be given at

that time should fail. When old rabbits are attacked by a looseness, dry food will in general restore them; but do what you will, it is very difficult, and in most cases impossible, to save young ones from sinking under it; dry food for them, as well as for the old ones, is the only remedy. One of the most common faults of rabbit fanciers is, first to over-feed their pets, and afterwards to neglect and half-starve them. Not only do thoughtless boys forget to feed the objects of their care, but frequently to suffer them to become diseased, for want of attention to cleanliness. Such neglect is cruel in the extreme. Rabbits should have their butches cleaned out every morning, and require many little attentions to provide for their comfort and health; and those who are not disposed to afford this, ought not to venture on rabbit keeping.

RACKET. — This game, which affords much healthy exercise, is played in an open space of ground, bounded on one side by a high wall, which should be painted black. The ground should be divided into four equal compartments, marked with chalk, so that there may be two divisions against the wall and two behind them, which divisions are occupied by the players. A broad line is marked with chalk or white paint along the whole length of the wall, at the height of forty-two inches from the ground, above which line every ball ought to strike the wall. The game is extremely simple, and may be played by two or more players. When it is played by four persons, one stands in each of the compartments; those near the wall being called in-hand, and those farthest from it out-hand players. When two play, each player takes two of the divisions, and the one who takes the first from the wall is called in-hand player, and the other out-hand player. Having determined by lot who is to begin the game, the in-hand player nearest the wall strikes his ball against it; if it strike under the line, goes over the wall, does not rebound into the out-hand spaces, or goes beyond the racket ground, the striker is out, and the out-hand player takes his place; but if the player is more successful, and the ball rebounds into the out-hand spaces, and hopping from the ground is sent back to the wall again to rebound into one of the in-spaces, the game goes on. The play of the game is, that the in-player should send the ball in such a manner against the wall that, on its rebound, the opposite party, or player, shall be able to pick it up or hit it. Whenever this happens, he who struck the ball counts one point, or an ace, and the play is continued until one player or party scores eleven, or as is sometimes now more frequently played, fifteen.

RADISH, CULTURE OF. — There are two forms of cultivated radish, the spindle-rooted, and the globular, or turnip-rooted; and these again are divided into the sprung and autumn varieties. The first may be sown at all times of the year; but the last, requiring a greater length of time to perfect their roots, can only be obtained during the latter part of the year. The soil best suited

for this vegetable is a mouldy loam, rather silicious than otherwise, and moderately fertile. It should be dry a full spade deep, and well pulverized. The subsoil is best to be rather hard. Manure should not be applied at the time of sowing, if avoidable, as it is apt to cause the roots to be fibrous. If employed, it should be in a finely divided putrescent state. The situation should always be open; but for early and late crops, warm and sheltered. Radishes are propagated by seed, which may be sown at all times throughout the year. For the earliest productions, during December, January, and February, in a hotbed; and in the open ground once a week during winter, and every fortnight during the other seasons of the year. In the open ground, the seed is generally sown broadcast, and well raked in, but drilling is the most preferable mode; in either case, it must be inserted thin, and buried half an inch deep; thick sowing causes the tops to be large and the roots sticky. If broadcast, the beds should be laid out four or five feet wide, divided by alleys a foot in width, the earth from which may be thrown out to raise the beds, or not, according as the season renders it desirable for them to be dry or moist. If drills are employed for the spindle-rooted, they are required to be three inches or under; for the turnip-rooted, four or five inches. When the seedlings are well up, and advanced to five or six leaves, they are ready for thinning; the spindle-rooted to three inches apart, the turnip-rooted to four. These spaces, however, require to be rather increased in moist warm weather. In dry weather they ought to be watered regularly every night, as the goodness of their flavour and tenderness depends upon their rapidity of growth, which is chiefly accelerated by a constant supply of moisture. The early and late crops that have to withstand the effects of frost, &c., should be kept constantly covered with dry straw or fern, to the depth of about two inches, or with matting, supported by short sticks, until the plants make their appearance, when the covering must be removed every mild day, but renewed towards evening, and regularly during frosty or tempestuous weather. The time of drawing radishes is by no means indifferent. They eat in the greatest perfection if pulled in the morning before the sun has attained any power, and laid in a cool damp place until wanted. The bed should have a plentiful watering in the morning before that on which they are taken, but none afterwards until subsequent to the drawing. In November, those wanted for winter must be taken up during dry weather and preserved in sand. To draw the small salads when the seminal leaves are pertaining, sowings must be made once a week. For the production of seed in April or May, some of the most perfect plants of a main crop, when in full vigour, must be taken up with as little injury as possible to the roots and leaves, and plant in rows three feet asunder each way, being inserted by the dibble completely down to the leaves. Water must be applied as well until they have taken root as occa-

sionally throughout their growth, especially when in flower. If practicable, it is best to leave some plants when raised. For forcing, a moderate hotbed is required for this crop, of a length according with that of the frame to be employed; the mould about eight inches deep, on the surface of which the seed is to be sown as soon as the violent heat is abated, and an additional half inch of mould over it. The seedlings are in general up in less than a week, and in six weeks they will be ready to draw. Throughout their growth, air must be admitted as freely as is allowable. The glasses, however, must be closed on the approach of evening, and mats or other covering put on, in proportion to the severity of the season. When the mould appears at all dry, a light watering must be given at noon. The plants must not stand nearer than two inches to each other. If there is a deficiency of frames, hoops and mats may be employed, a frame of boards being formed round the bed, light and air being admitted as freely and as often as possible. If seed is sown within a frame without any bottom heat, the plants will be two or three weeks more in advance if sown in the open ground.

RADISHES BOILED.—The turnip radishes are the best for boiling. They should be freshly drawn, young and white. Wash and trim them neatly, leaving on two or three small inner leaves of the top. Boil them in plenty of salted water from twenty to thirty minutes, and as soon as they are tender send them to table well drained, with melted butter or white sauce. Common radishes when young, tied in bunches, and boiled from eighteen to twenty-five minutes, then served on a toast like asparagus, are very good.

RAGOUT.—See BEEF, CHICKEN, FOWL, LAMB, MUTTON, RABBIT, VEAL, &c.

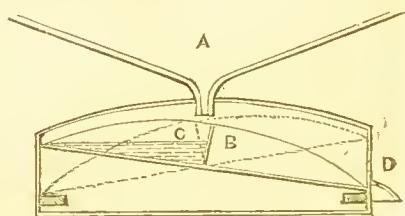
RAGS.—Rags should never be thrown away as useless, as they may be employed for a variety of purposes in connection with domestic and rural economy. When rags have become dirty they should be boiled in the suds used for washing, dried, and put by in the rag-bag. Linen rags should be especially saved, for they are extremely useful in sickness. If they have become dirty and worn by cleaning silver, &c., wash them and scrape them into lint. Rags also form an excellent manure, their composition principally consisting of a substance similar to albumen united to gelatine.

RAILWAY TRAVELLING.—As this has become the almost universal mode by which passengers and effects are transported from one place to another, a few hints calculated to render the mode of travelling more comfortable, cannot fail to be acceptable. The first thing which a person should do who is about to travel by rail is to ascertain certainly from the time table the hour at which the train starts; the next thing is to make arrangements for being conveyed from the place he is staying at to the station; and the third provision is to have everything packed in readiness, so as to avoid hurry and confusion at the last moment. If a person has a great deal of

luggage, such as, for instance, two or three rooms full of furniture, he will do well to request the railway officials to send a wagon, in which the goods may be packed, and this being placed bodily upon the rails, arrives at its destination without the articles being disturbed, is then lifted from the rails, and driven to the assigned destination. When the choice of train is optional, the intending traveller should observe whether the one he is about to adopt is a fast or slow one; in the latter case, the travelling is comparatively tedious, the pace being a very moderate one, and all the stations stopped at. Express trains are also, as a matter of course, the best for speed; but as an extra fare is frequently demanded by these trains, that again remains for the traveller's consideration. The farthest corner, with the back to the engine, is the most comfortable place in a railway carriage, as the passenger is here less likely to be disturbed, does not feel the motion of the train, and escapes cinders, dust, &c. It is possible for a railway traveller to make himself very comfortable, if he is so disposed. In the first place, a rug should be wrapped round the legs to keep them warm, a close fitting cap drawn over the head for the same purpose, and to admit of leaning back; and for second and third class passengers, an air-cushion to sit upon, to soften the rigour of the wooden seat. Unless the distance is a very long one, it is desirable not to leave the carriage, as the former degree of comfort is seldom secured; the getting out to obtain refreshment is purely a matter of taste. One thing is certain, that you are not so sure to obtain what you order, or at any rate not until the train is again about to start. Experienced travellers carry their own provisions with them, by which means they may appease their wants whenever they please, and at their leisure. Many persons who are very fond of smoking, find it a great denial to be debarred from enjoying their cigar or pipe when travelling by railway; on some of the lines this want is met, by providing carriages expressly for smokers, and this fact should be ascertained previous to starting. There are also carriages on most lines devoted exclusively to the use of ladies, a source of great comfort and convenience for some female travellers. When about to start by railway, make a point of always being a few moments beforehand; this admits of your making choice of seat and carriage, and taking up your position in a more satisfactory manner than when hurried.

RAIN.—The life of plants and animals depending as much on moisture as on temperature, and their development being greatly modified by the dryness or humidity of the atmosphere, the cause and effect of rain become important objects of study to the agricultural student. A rain-gauge is an instrument employed for measuring or gauging the quantity of rain which falls at a given place. Its principles and construction are of the simplest nature; but it is made in a variety of shapes. A convenient form of the instrument is represented in the

annexed figure, where the rain which enters the funnel (*a*) is collected in a cylindrical vessel of copper (*b*), connected with which at the lower part is a glass tube (*c*) with an attached scale. The water stands at the same height in the cylinder and glass tube, and being visible in the latter, the height is read immediately on the scale. The cylinder and tube are constructed so that the sum of the areas of their sections is to given parts: for instance, a tenth of the area of the funnel at its orifice, each inch of water in the tube is equivalent to a tenth of an inch of water entering the mouth of the funnel. A stop-cock (*d*) is added, by which the water is drawn off from the cylinder after each observation is made. A rain-gauge on a new and greatly improved construction is shown in the annexed figure. Its superiority consists in its power of self-registering the quantity of rain fallen. It consists of a funnel (*A*) of the usual form, through which the rain passes to a vibrating



trough (*B*), when, after a sufficient quantity has fallen into its higher side (*C*), it preponderates and discharges the rain, which escapes by a tube (*D*), and, by its vibrating action, moves a train of wheelwork and indices, to record upon a dial-plate the quantity of rain fallen.

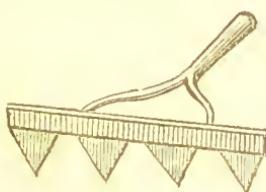
RAISIN PUDDING.—Beat well together three-quarters of a pound of flour; the same quantity of raisins; six ounces of beef suet finely chopped, a little salt, some grated nutmeg, and three eggs which have been thoroughly whisked, and mixed with about a quarter of a pint of milk, or less than this should the eggs be large. Pour the whole into a buttered dish, and bake it for an hour and a quarter.

Flour, $\frac{3}{4}$ lb.; **raisins,** $\frac{3}{4}$ lb.; **suet,** 6 ozs.; **salt,** small pinch; **nutmeg,** $\frac{1}{2}$ teaspoonful; **eggs,** 3; **milk,** $\frac{1}{2}$ pint.

RAISIN WINE.—First boil the water which is to be used for the wine, and let it again become perfectly cold; then put into a sound sweet cask eight pounds of Malaga raisins for each gallon that is to be used; taking out only the very large stalks; the fruit and water may be put in alternately

until the cask is full, the raisins being well pressed down in it; lay the bung lightly over, stir the wine every day or two, and keep it full by the addition of water that has, like the first, been boiled, but which must always be quite cold when it is used. So soon as the fermentation has entirely ceased, which may be in from six to seven weeks, press in the bung, and leave the wine untouched for twelve months; draw it off then into a clean cask and fise it, if necessary, with isinglass tied in a muslin bag and suspended in it. The refuse raisins make admirable viuegar, if fresh water be poured to them and the cask placed in the sun. March is the best time for making the wine.

RAKE.—An implement used in agriculture and gardening. The rake used in agriculture is of two kinds, the hay-rake and the corn-rake. Both consist of a handle and head set with teeth; in the corn-rake these are generally of iron. The hay-rake is usually made of willow, that it may be light and easy to work; and the teeth should be short, otherwise they are apt to pull up the stubble or roots of the grass in raking. Sometimes the teeth are made to screw into the head, and fasten with nuts, which prevents their dropping out in dry seasons. The corn-rake is of different dimensions and constructions in different counties. In general, the length of the rake is about four feet; and the teeth of iron about four inches long, and set from one to two inches apart. The daisy rake has teeth sharpened on both edges like lancets, and is used for raking or tearing off the flower-heads or buds of daisies and other plants in grass lawns. The drill-rake, employed as its name imports, is a simple and most efficient implement, and is constructed of a head-piece, like that of a common rake, only double the size, into which broad flat wooden teeth are set, tapering towards the points, and at such distance apart as the drills are to be drawn. Sometimes the head is in two



flat pieces, to admit of the teeth being set at different distances, to adapt it to different crops, according to the distance the rows are to be apart, these pieces being screwed together at each end; or, if more than three drills are to be drawn at once, a third screw is placed in the middle. The ordinary garden-rake is a well-known implement, although much less in use than formerly when broad sowing was prevalent. Still it has its uses in covering up seed, separating and pulverising the soil, &c. The head of the rake is best made of wood, and of this ash is most desirable. If the head be of iron, they are continually coming loose.

Rakes, with heads about six inches long, are required for dressing flower-borders, but for open ground-work the length may be fifteen inches. The rake and the hoe are sometimes attached to one handle, but although thus useful as a combination, it is a form which, without care, is liable to frequent entanglement in the flower-garden, for which it is designed.

RANUNCULUS. This favourite flower is propagated by dividing the roots, which naturally produce offset shoots, which attain maturity in one season, and are easily separated at the season of lifting. Ranunculus may also be produced from seed.



The sowing is best performed in October and in February. Flat pots, pans, or hoxes should be filled with moderately rich loam, with about a sixth part of leaf-mould, carefully cleared from insects, particularly wire-worms. Under the compost sufficient drainage should be placed, and over that the siftings, or coarser portions of the soil. The surface being rendered smooth and level, the seed should be sown thinly; for, if the young crop come up too thick, the plants are weakened, and many perish. Each seed should be sown the eighth of an inch apart from the neighbouring one. Cover lightly with finely-sifted soil, and apply a gentle watering with a fine rose watering-pot. Set the seed-pans on a dry floor of coal-ashes in an open well-exposed place, and cover them with a frame and glass shades. Little shading will be required at this period of the year, and but a limited supply of water; nevertheless the soil must not be allowed to become at all dry. In four or five weeks the young plants will appear, when great vigilance will be required to guard them against the attacks of insects, dry cutting winds, and even severe frosts. In May remove the seed-pans to an open border, where the morning sun only shines upon them, and plunge them in the soil. Here they should remain till the middle of July, when the foliage will begin to ripen and turn yellow: at this time water must be withheld; and if covered with a spare glass frame, so much the better. When the foliage has totally disappeared, the roots will be ripe, and in a very proper state for taking out of the soil. This must be done with

care, so that none of the very small ones be left behind, as these often turn out the finest varieties. Dry the roots moderately in the shade, and pack them in boxes amongst dry sand. The best season for planting is the middle of October, the latest period at which they can be safely done is the beginning of February. By following the former course the roots suffer less from being kept dry; they also begin to vegetate slowly, on account of the soil not being as yet cooled down by frost, enabling them to make fresh roots, and so be in a condition to start strongly into growth early in spring. The roots are fit for taking up when the foliage has died down; and in dry seasons and soils this should then be done. In wet soils—and such, he it observed, are very unfavourable for this plant—and in late wet seasons, the roots should be taken up before the foliage has completely died down, and just after it has assumed a yellowish colour. There is danger in allowing the roots to remain too long in the ground, because, particularly in wet seasons, they are apt to begin growing again, so that this must be guarded against. When taken up, the roots should be gradually dried, cleansed of soil, and placed in shallow drawers, or in canvas or paper bags, and kept in a dark dry place, secured from mice, and occasionally examined until the time of planting again arrives.

RAPE SEED.—The culture of this plant ceases after the sowing of the seed, as the crop is not thinned out like other rooted green crops, the object being to raise a sufficient number of stems to produce a large crop of leaves, for which purpose two pounds of seed to the acre will suffice; and as the seed is large compared with that of the common turnip, and about the size of that of the Swede, that quantity will not produce too many plants to stand in the drill. Rape will grow on almost any soil, and certainly will on clay, on which it requires less manure than on hard loam; but it grows on none so well as on drained moss resting on a clay subsoil. The ashes of the surface of a peat bog, pared and burned, form excellent manure for rape or drained moss. Rape is raised to be consumed by sheep, by folding on the land, as a mode of manuring fallow ground. This is a common practice in England, for the double purpose of manuring the soil and fattening sheep; and to attain both ends the rape seed is sown in May, and the crop is ready for being folded on in July or August.

RASPBERRY CAKE.—Take half a pound of dry raspberries, and a pound and a quarter of sugar; when the sugar has been sufficiently boiled and thoroughly skimmed, throw in the raspberries, adding the white of an egg beaten with a little cream, and mix the above ingredients well with it; then give the whole a boil, and turn it out into moulds.

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RASPBERRY CORDIAL.—To a gallon of brandy put two quarts of raspberries; bruise them in a little of the brandy; let

them steep for ten or twelve days; cover them up close, then strain them through a sieve; put to the liquor three-quarters of a pound of sugar; when it is fine bottle it.

RASPBERRY CREAM.—1. Rub a quart of raspberries through a hair sieve, in order to remove the seeds; mix the juice well with cream; sweeten it with sugar to taste, then put it into a stone jug, and whip it to a froth. As the froth rises, take it off with a spoon, and lay it upon a hair sieve. When there is as much froth as is required, put what cream remains in a deep china dish, and pour the frothed cream upon it, as high as it will lie on. 2. Take half a pound of raspberry jelly or jam, with the seeds taken out; whisk quickly three-quarters of a pint of rich cream, to which has been added the juice of a lemon. The jam must be sweetened with sifted lump sugar, and may be coloured with a very little cochineal; three-quarters of an ounce of gelatine must be previously dissolved in rather less than a quarter of a pint of water, and added to the cream at last. It must be put into the mould as soon as it begins to set. If required to be kept, it should be put into a crockery mould, that the colour may be preserved.

RASPBERRY JAM.—1. Raspberries, 1 quart; cream, sufficient; sugar, to sweeten. 2. Raspberry jelly or jam, $\frac{1}{2}$ lb.; cream, $\frac{3}{4}$ pint; lemon, juice of 1; sugar, to sweeten; cochineal, to colour; gelatine, $\frac{1}{2}$ oz.; water, $\frac{1}{2}$ pint.

RASPBERRY, CULTURE OF.—There are many varieties of this plant; for a moderate sized garden the best are Woodward's red globe, Barnet, double-bearing, Cornwallis's seedling, Cornwallis's prolific, Lord Exmouth's red Antwerp, late-bearing Antwerp, yellow Antwerp, white Antwerp, Cornish, Siberian, late cane. The varieties can be perpetuated by young sucker-shoots rising plenteously from the root in spring and summer, when these have completed one season's growth, they are proper to detach with roots for planting, either in the autumn of the same year or the next spring, in February or March, but not later than the middle of April. These new plants will bear some fruit the first year, and furnish a succession of strong-bottom shoots for full bearing the second season. New varieties are easily raised from seed; and they come into bearing the second year. All the varieties will succeed in any common mould, trenched about two feet deep and sufficiently manured; but the soil in which the raspberry bush best prospers and bears the finest fruit is a rich light loam. In forming a plantation, it is necessary that the respective heights to which the different varieties attain should be known. This will enable the planter to arrange them to the greatest advantage. For this purpose the tallest growers must be placed at the back, the middle growers next, and the shortest growers in front. By this mode of arrangement the shorter and the middle growers will receive their due proportion of sun, without being interrupted by those which attain the greatest degree of elevation. The

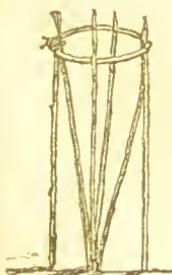
necessity of such an arrangement as this must be obvious to those who are aware of the advantage to be derived, in wet and cloudy seasons, in leaving this delicate and tender fruit fully exposed to the sun, and receiving a free and plentiful admission of air. In making such a plantation as this, it will be advisable, if possible, to have the rows extend from east to west. They should be four feet at least from each other; and supposing one row only can be allotted to each sort, and that six rows are to form the extent of the plantation; then the first or north row may be planted with the Cornish, the second with Woodward's red globe, the third with red Antwerp, the fourth with yellow Antwerp, the fifth with Barnet, and the sixth with double-bearing. The shoots in the first and second rows should be four feet apart; those in the third and fourth, three feet and a-half; those in the fifth and sixth, three feet. In planting, young suckers should be made choice of; and if abundant, three of these should be allowed to each stool, placing them in a triangle of six inches apart. If fruit is not wanted the first year, the plants will gain considerable strength by being cut down within six inches of the ground, as soon as planted, instead of leaving them three or four feet high in order to obtain from them a crop of fruit. In training, the earliest and finest fruit are obtained from canes planted beneath a south wall. After the stools are established, if fruit of the largest size be required, care must be taken to select the strongest canes, and a few of these only from each plant in proportion to its strength, shortening each to about four-fifths of its original height: these should be supported singly by a small stake to each. For general purposes stakes are unnecessary, as three, four, five, or six canes from the same stool may be tied together on their tip ends; this may be done so as to give each cane a bow-like appearance, which will allow more room for their laterals to form than if tied up in a perpendicular manner. In open ground the best mode of training is in the form of round small loops, as seen in the annexed figure. As a succession of

this very favourite fruit must always be desirable for the dessert-table, it may be prolonged considerably beyond its usual time, by cutting down some of the shoots wholly to within a few inches of the ground, instead of leaving the canes at four-fifths of their length. This operation may be practised upon both the red and yellow Antwerp, as well as upon several of the other varieties from which good crops can be obtained in August. The double-bearing varieties should have every alternate stool cut down annually: these will furnish an abundance of fruit, as late as September, and in a fine warm autumn even to a later period. In summer, the plants

should be kept clear from weeds by hoeing between the rows; at the same time loosening the earth about the plants. Under this management the plants, if tolerably strong, will yield a moderate crop the first summer, and supply young stems for planting, in greater plenty and perfection, the following season, and so from year to year, the summer culture should be repeated. As the plants get established, let all straggling suckers between the rows, or from the extreme roots of single stools, be cleared out by hoeing, or twisted off to admit the sun and air freely to the fruit. Every winter or spring, it is necessary to cut out the dead stems, and to thin and regulate the succession of young shoots. This annual pruning may be performed any time during open weather, from November to the beginning of April. When kitchen-garden crops are cultivated between the rows, it is most convenient to do this as soon as the old leaves begin to decay. As to pruning indiscriminately in the open weather of winter, it sometimes happens that severe frosts immediately follow, and partially kill the plants; therefore it is safer to shorten the tender young stems early in spring. Cut out all the old dead stems clean to the bottom; and having selected from the strongest young shoots on each main stool, three, four, or five to be preserved for a succession of bearers, cut away the superabundant ones close to the ground. Let each of the shoots retained be pruned at the top, below the weak bending part; cutting them, in the smaller plants, to about three or four feet in length, and in the large sorts to the length of five or six feet. If any of the stems diverge irregularly or straggle much asunder, they may be tied together at top, and thus the strong ones will support each other; or the taller varieties may have the support of stakes. It has been found by experience that raspberries will not thrive long in the same spot of ground. Plantations in gardens, therefore, ought to be renewed frequently. To obtain fruit of a very large size, the best method is, other circumstances being favourable, to destroy all the suckers. The fruit of the different varieties comes in from the end of June or July till October or later. As it ripens it should be timely gathered for immediate use, because when fully ripe it will not keep above two or three days before it moulds or becomes maggoty, and unfit to be used. Raspberries may be forced by growing the plants in large pots plunged in the open garden, and the plants shaken out carefully and planted in front of the pits or houses annually.

RASPBERRY DROPS. — Press out the juice of some ripe raspberries through a piece of flannel or cloth, upon twice their weight of sugar, boil them till they crystallize when cold, then drop the sugar thus boiled upon white paper, or upon tin plates, and dry in a slow oven, or in the sun.

RASPBERRY EFFERVESCENT DRAUGHT. — Take six pints of raspberry juice, filter till quite bright and clear, make a syrup with three pounds of sugar, and add six ounces of tartaric acid. Keep this in well-corked bottles. For a tumbler three



yellow Antwerp, as well as upon several of the other varieties from which good crops can be obtained in August. The double-bearing varieties should have every alternate stool cut down annually: these will furnish an abundance of fruit, as late as September, and in a fine warm autumn even to a later period. In summer, the plants

parts full of water, add two tablespoonfuls of the above syrup, and a scruple of carbonate of soda. This forms a most agreeable draught for summer.

RASPBERRY FLUMMERY.—Mix with half a pint of white wine vinegar one pound of preserved raspberries, let it boil for three or four minutes, stirring it constantly, strain it through a hair-sieve; dissolve an ounce of isinglass in half a pint of water; mix with it three-quarters of a pound of powdered sugar, add it to the strained raspberries; stir it all well together; boil and strain it through muslin, and put it into a shape. Turn it out when cold.

℞ White wine vinegar, $\frac{1}{2}$ pint; raspberries preserved, 1lb.; isinglass dissolved in $\frac{1}{4}$ pint of water, 1oz.; sugar, 3lbs.

RASPBERRY ICE.—To a pint of cream add an ounce of isinglass (dissolved in the smallest possible quantity of water), two tablespoonfuls of powdered loaf sugar, and a teacupful of raspberry jelly, made liquid. Mix all well together, put it into a mould, and let it be placed in a cellar, or any very cold place until wanted. This recipe, from the ease and expeditiou with which it can be prepared, will be found excellently adapted for family use wheu, from any cause, an extra dish of sweets is unexpectedly required. If no jelly should be at hand, raspberry jam may be strained through a piece of muslin to get rid of the seeds, and it will then answer the purpose quite as well.

℞ Cream, 1 pint; isinglass dissolved, 1oz.; sugar, 2 tablespoonfuls; raspberry jelly, 1 teaefupful.

RASPBERRY JAM.—Bruise gently with the back of a wooden spoon, six pounds of ripe and freshly gathered raspberries, and boil them over a brisk fire for twenty-five minutes; stir to them half their weight of sugar, roughly powdered, and when it is dissolved, boil the prserve quickly for ten minutes, keeping it well stirred and skinned.

RASPBERRY JELLY.—Bruise the fruit a little and place it high above a clear fire, that the juice may be gently drawn from it; it may remain thus for twenty minutes or longer without boiling, and be simmered for four or five minutes; strain and weigh it, boil it quickly for twenty minutes, draw it from the fire, add three-quarters of a pound of good sugar for each pound of juice, and when this is dissolved, place the pan again on the fire, and boil the preserve fast from twelve to fifteen minnutes longer; skim it thoroughly, and keep it well stirred: the preserve will then require rather less boilling. When it jellies in falling from the spoon or skimmer, it is sufficiently done. Nothing of tin or iron should be used in making this preserve, as these metals will convert its fine red colour into a dull purple. A jelly for flavouring creams may be made as follows:—Take the stalks from some quite ripe and freshly gathered raspberries, stir them over the fire until they render their juice freely, then strain and weigh it; or press it from them through a cloth, and then strain it clear; in either ease, boil it for five miunutes after it is weighed, and for

each pound, stir in a pound and a quarter of sugar reduced to a fine powder, sifted and made very hot; boil the preserve quickly for five minutes longer, and skim it clean. The jelly thus made will sufficiently sweeten the creams without any additional sugar.

RASPBERRY PASTE.—Mash a quart of raspberries, strain one half and put the juice to the other half; boil them for a quarter of an hour, put to them a pint of red currant juice, and let them boil altogether till the raspberries are done enough. Then put a pound and a half of double refined sugar into a clean pan, with as much water as will dissolve it. Boil it to a mass again, then put in the raspberries and the juice, scald and pour the mixture into glasses. Put them into a stove to dry, and turn them when necessary.

℞ Raspberries, 1 quart; red currant juice, 1 pint; sugar, 1 $\frac{1}{2}$ lb.

RASPBERRY PIE.—Place the fruit, picked and washed, into a flattish pie-dish, raising it high in the middle. Put in sufficient sugar, and cover with a rich light paste. Currants are frequently mixed with raspberries for making a pie, as they improve the flavour and add to the juice.

RASPBERRY PUDDING, BAKED.—Take a sufficient quantity of raspberry jam, a little good cream, the yolk of eight eggs well beaten, sugar to sweeten, and half a pound of clarified butter; beat the whole well together and bake in a dish lined with puff paste.

RASPBERRY PUDDING, BOILED.—Line a basin with a plain suet crust, and fill with the fruit, either preserved or prepared as pies and puddings. Pinch in the paste, tie a floured cloth over the basin, boil from two to three hours, and turn it out.

RASPBERRY RATAFIA.—Take three pints of raspberry juice, and half a pint of cherry juice; dissolve in these a pound and a half of refined sugar; let it stand some time, and then add three quarts of the best brandy; strain it, and when quite clear, bottle it. Put it into well-corked bottles.

℞ Raspberry juice, 3 pints; cherry juice, $\frac{1}{2}$ pint; sugar, 1 $\frac{1}{2}$ lb.; brandy, 3 quarts.

RASPBERRY SPONGE.—Dissolve in a little water three-quarters of an ounce of isinglass, add to it three-quarters of a pint of cream, and the same proportion of new milk, half a pint of raspberry jelly, and the juice of a lemon. Whisk it well in one direction until it becomes thick, and looks like sponge, then put it into an earthenware mould and turn it out the next day.

℞ Isinglass dissolved in water, $\frac{1}{2}$ oz.; cream, $\frac{1}{2}$ oz.; milk and cream, $\frac{2}{3}$ pint; raspberry jelly, $\frac{1}{2}$ pint; lemon, juice of 1.

RASPBERRY SYRUP.—Put any desired quantity of fruit into a pan or basin, and reduce it to a mash. Cover the basin or pan, so as to keep out dust or dirt, and put it into a warm place for three or four days, or until fermentation commences, so as to destroy the mucilage, or the syrup would become a jelly in the bottles. Filter the juice through a flannel bag, and let it be clear. To a pint of filtered juice add two pounds of powdered loaf sugar, which put

into a preserving pan; place it on the fire, and stir the mass together until the sugar is dissolved. Take off all the scum as it rises. When cold, bottle it and cork close.

RASPBERRY TART.—Roll out some thin puff paste, and lay it in a patty-pan. Put in the raspberries, strew some fine sugar over them, cover with a thin lid and hake the tart. Mix a pint of cream with the yolks of two or three eggs well beaten, and a little sugar. Cut open the tart, pour in the mixture, and return it to the oven for five or six minutes. Another way is, to line the dish with puff paste, put in sugar and fruit, lay bars of paste across and bake the tart.

RASPBERRY VINEGAR.—Bruise a quart of fresh-gathered raspberries in a hasin; pour over it a pint of vinegar, cover it closely; let it stand for three days, and stir it daily; strain it through a flanuel bag; let it drop as long as anything will come from it, but do not press it; to a pint of the liquor put a pound of powdered loaf sugar, boil it for ten minutes and take off the scum as it rises. When cold, bottle and cork it securely. This is a very useful preparation to keep in a house, not only as affording the most refreshing beverage, but being of singular efficacy in complaints of the chest. A large spoonful or two in this case is to be taken in a tumbler of water.

℞ Raspberries, 1 quart; vinegar, 1 pint; sugar, 1lb. to each pint of liquor.

RASPBERRY WATER ICE.—Take a pint of strong syrup with half a pint of water. Mix, first rubbing the fruit through a sieve, and freeze.

RASPBERRY WINE.—Thoroughly wash, clean, and stone, three pounds of raisins, then boil two gallons of spring water for half an hour, as soon as it is taken off the fire, pour it into a deep stone jar and put in the raisins with six quarts of fresh raspberries, and two pounds of loaf sugar; stir the whole well together, cover the jar closely, and set it in a cool place, stir it twice a day; then pass it through a hair sieve, and a pound more of sugar, and put the liquor into a barrel; and when fine, which will be in about two months, bottle it off. To each bottle, put a tablespoonful of brandy or a glass of wine.

℞ Raisins, 3lbs.; water, 2 gallous; raspberries, 6 quarts; sugar, 3lbs.

RASPBERRIES, TO PRESERVE WHOLE.—Have a pan of sugar boiled to the blow. Place in a few, fine, unbroken, dry, but not over-ripe raspberries, boil them for a few minutes, and take them out with a skimmer without breaking them. Do more raspberries with the same sugar, and so on until all are done, putting them, when taken out, as dry as possible into preserving jars; lastly, pour over them the rest of the syrup, or some apple jelly. Put them by in closely-corked bottles.

RATAFIA.—A liquor prepared from different kinds of fruits. These fruits should be gathered when in their highest perfection, and the largest and finest chosen for the purpose. *For Red Ratafia.*—Take twenty-four pounds of black-heart cherries, four

pounds of small black cherries, three pounds each of raspberries and strawberries. Pick the fruit from their stalks, and bruise them, in which state let them continue for twelve hours; then press out the juice, and to every pint of it add a quarter of a pound of sugar. When the sugar is dissolved, run the whole through a filtering bag, and add to it three quarts of proof spirit. Then take four ounces of cinnamon, an ounce of mace, and two drachms of cloves. Bruise these spices, put them into a still with a gallon of proof spirit and two quarts of water, and draw off a gallon with a brisk fire. Add as much of this spicy spirit to the ratafia as will render it agreeable; about a fourth is the proportion. *Dry or Sharp Ratafia.*—Take thirty pounds each of cherries and gooseberries, seveu pounds of mulberries, and ten pounds of raspberries. Pick all these fruits cleau from their stalks, &c., bruise them, and let them stand for twelve hours; but do not sulser them to ferment. Press out the juice, and to every pint add three ounces of sugar. When the sugar is dissolved, run it through the filtering bag, and to every five pints of liquor add four pints of proof spirit, together with the same proportion of spirit drawn from spices.

RATAFIA CAKES.—Blaunch and pound with the whites of four eggs, a pound of Jordan almonds. Add to this two pounds of fine sugar, and pound these ingredieuts to a paste; then put in eight more whites of eggs. Beat the whole well together, and chop the biscuit from a knife-point on to wafer paper; bake them slowly on tins.

℞ Almonds, 1b.; sugar, 2lbs.; eggs, 12 yolks.

RATAFIA CREAM.—In a teacupful of thin cream boil two or three large laurel or young peach leaves; when it has boiled three or four minutes, strain, and mix with it a pint of rich sweet cream; add three well-beaten whites of eggs; and sweeten with pounded loaf-sugar. Put it into a saucepan, and stir it gently in one direction over a slow fire till it be thick; pour it into a china dish, and, when quite cold, ornameut it with sweetmeats cut out to resemble flowers.

℞ Cream, 1 teacupful; laurel or peach leaves, 2 or 3; cream, 1 pint; eggs, 3 whites; sugar, to sweeten.

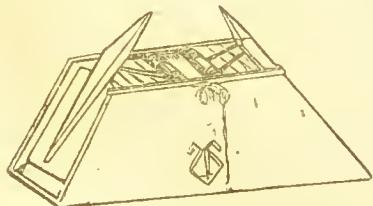
RATAFIA DROPS.—Blaunch and pound with an ounce of fine sugar and a little water, four ounces of bitter, and two ounces of sweet almonds. Add to the almond paste, a pound of sugar, the beaten whites of two eggs, and a little noyeau. Beat the whole well, and when light, drop the batter from a biscuit-funnel on paper of the size of pigeons' eggs, and bake in tins.

℞ Sugar, 1oz.; water, sufficient; sweet almonds, 2ozs.; bitter almonds, 4ozs.; sugar, 1lb.; eggs, 2 whites; noyeau, to flavour.

RATAFIA PUDDING.—Blanch and pound in a mortar until they become a paste, four ounces of sweet, and a quarter of an ounce of bitter almonds with a dessert spoonful of water; then add an ounce and a half of fresh butter, melted with a little cream, two well-beaten eggs, alittle nutmeg, sugar,

and brandy. Butter a cup or an earthenware dish, pour in the pudding and bake it. When done, turn out and serve with the following sauce. Take a wineglassful of white wine, half a glass of rum, a little grated lemon-peel, sugar to taste, and a pint of powdered cinnamon: stir this into some thick melted butter, and serve with the pudding.

RATS, TO DESTROY.—Rats prove to be the most troublesome and destructive kind of vermin both within and without doors. One of the best ways of destroying them in the house is as follows:—Melt hog's lard in a bottle plunged in water, heat to about a hundred and fifty degrees of Fahrenheit; introduce into it half an ounce of phosphorus for every pound of lard; then add a pint of proof spirit or whisky; cork the bottle firmly after its contents have been heated to a hundred and fifty degrees, taking it at the same time out of the water, and agitate smartly till the phosphorus becomes uniformly diffused, forming a milky-looking liquid. This liquid being cooled will form a white compound of phosphorus and lard, from which the spirit spontaneously separates, and may be poured off to be used again, for none of it enters into the combination, but it merely serves to comminute the phosphorus, and diffuse it in very fine particles through the lard. This compound, on being warmed very gently, may be poured out into a mixture of wheat, flour, and sugar, incorporated therewith, and then flavoured with oil of rhodium or not at pleasure. The flavour may be varied with oil of aniseed, &c. This dough, being made into pellets, is to be laid in rat-holes. By its luminousness in the dark it attracts the notice of the vermin, and, being agreeable to the smell and taste, is greedily devoured, and proves certainly fatal. The destruction of these animals in farmeries and gardens is a work of more considerable difficulty—the extraordinary numbers in which they muster, their extended field of action, and the out-of-the-way nests they build for themselves, frequently baffling the best-directed efforts. With regard to farmeries, the best method of warding off the visits of rats, is to have



the barn floor and roof constructed in such a manner as to prevent them obtaining a permanent harbour in the building. The next best step is, before the entire clearance of the barn, while yet a little corn remains, to prevent them quitting it, to close every part of the barn by carefully covering any holes there may be with sacks and tarpaulins, so as to prevent all access

of the outward air, leaving only the door open for a few minutes while the process is going on. This done, some common iron chafing dishes should be placed upon the floor and in the hags, or, if they cannot be had, build up a few bricks, clay, or any rubbish that will secure a fire from spreading, leaving a cavity in the centre, and filling it up with charcoal. Then light the charcoal from the bottom, and when the heaps are all burning, quickly strew a good quantity of broken brimstone upon the top; retire immediately, shut the door fast, and leave the building entirely closed during the two following days. On opening it, the greater portion of the rats and mice will be found dead around the charcoal; and, although some of them may have been suffocated while in their holes, and if not discovered will occasion an unpleasant smell until their remains are dried up, still it will not last long. The operation should be repeated just previous to harvest, and if any opening he found into the barns while they are full, by the burrowing of the rats, brimstone matches should be inserted into them before they are stopped up. In gardens, the rat-trap may be used to advantage; this implement should generally be a box, or an enticing engine of some sort rather than a toothed iron trap, because, unless there is a great scarcity of food, it will not be allured by the ordinary bait; whereas a trap may be so disguised by straw, or moss, or leaves, and so scented by oil of anise, as not to be recognised by the rats until they are taken.

RAVEN.—Although the raven scarcely comes under the denomination of a cage bird, it nevertheless affords great amusement to keep, and repays the trouble if there be sufficient room for it. The raven



is not very choice in its food, and will eat anything that is ordinarily consumed at table, or the refuse of food generally. No one should attempt to keep a raven in a cage, or even in a small enclosure, as the wild spirit of the bird prefers freedom of

action. A careful watch should be kept upon it, as ravens are much given to mischief and theft.

RAZORS, PRESERVATION OF.—As the razor is a most important implement of the male toilet, the keeping it in a fit state for constant and immediate use is an important consideration. The best plan is to have a razor for every day in the week, for it is certain that the edge of a razor is much improved when the instrument has lain by for a few days. To keep a razor in good condition, it should be stropped after using, having previously been dipped in hot water and wiped perfectly dry. Dryness is essential to its preservation; and it is even a good plan to place the razor, after using, before the fire, and to put it away while hot. The mode of applying the razor to the beard is of no small importance. If it be applied flat against the face, the edge must be most keen; and even then, much of the finest hairs bend down and pass beneath it. On the other hand, if the angle at which the back of the razor is raised from the face be too great, the edge of the razor is more speedily turned, and not only requires more stropping, but is consequently more speedily worn out. The edge of the razor should be applied to the beard at the slightest possible angle, but to lay down any absolute rule upon this is impossible, and must be ascertained by observation and experience. It will, however, be easily understood, that the pain frequently felt in shaving very frequently arises from the razor not being applied at the most effective angle. Razors should always be kept under lock and key, not only to prevent accidents with them, but to keep them from being used for other than their legitimate purposes.

RAZOR STROP.—Several kinds of strops or implements for sharpening razors upon, have been from time to time invented. The best, perhaps, is one of American invention with four sides of different degrees of fineness, from the hone to smooth stropping. In any case, take care always to draw the razor smoothly and flatly from head to point along the strop. Do not draw first one way and push another. In general, one or two turns will be enough. Razor paste is the term applied to certain compositions employed on razor-strops to give them the necessary whetting surface. 1. Emery reduced to an impalpable powder, two parts; spermaceti ointment, one part; mix together, and rub it over the strop. 2. Jeweler's rouge, blacklead, and suet, mixed in equal parts. 3. Prepared putty-powder, one ounce; powdered oxalic acid, a quarter of an ounce; powdered gum, twenty grains; make it into a stiff paste with water, and evenly and thinly spread it over the strop with very little friction; this last will give a fine edge to the razor, and its efficiency is still increased by being moistened.

READING.—The employment of reading is one of the most agreeable and profitable exercises; and, when practised aloud, is beneficial in a physical point of view. To be able to read clearly and distinctly is an important acquisition, and one which is not

only satisfactory to the reader himself, but capable of affording much agreeable entertainment to others. It is nevertheless to be regretted that this accomplishment is possessed by comparatively few persons, which is the more surprising from the fact of its being so easily attained. The truth is, that incorrect reading arises from carelessness and indifference, for, where a person is in earnest with the subject he is perusing, and brings to bear the commonest rules of elocution, he cannot fail to read well. The reader should bear in mind that every word, every letter carries with it a certain significance which, by being slurred over, fails to produce its intended effect, and in many cases totally alters the sense. Practising the art of reading aloud and alone will effect much good. In London and other large cities, public readers have been recently established, who select certain well-known pieces in prose and poetry, and read them to the audience; attending these readings, and listening with close observation to the reader, will serve to correct many errors which an ordinary reader never discovered before, and he will at the same time be able to judge how much greater is the effect produced, how infinitely clearer the sense becomes, and how much more telling the sentiment appears, when the piece under perusal is read by an accomplished elocutionist, instead of being slovenly delivered by an incompetent and careless reader. The physical advantages arising from reading aloud consists of the exercise which is thus given to the lungs. At the same time, the reader, when he finds his voice failing him, his throat becoming irritated, and his chest uneasy, should desist for a time, and resume his task after he has taken sufficient rest.

READY RECKONER.—Books: *Pocock's Banker's and Merchant's*, 2s. 6d.; *Wise and Simpson's Readiest ever Invented*, 5s.; *Collier's*, 1s.; *Leybourne's*, 2s. 6d.; *Masters's*, 1s.; *Smith's Barrack*, 1s. 6d.; *Christison's Complete*, 2s. 6d.; *English and Foreign*, 2s. 6d.; *Shelton's English and French Tables*, 2s. 6d.; *McDerment's Farmer's*, 5s.; *Harrison's*, for *Coal Trade*, 2s.; *Masters's Finding the Price*, 1s.; *Fordham's Mallster's and Farmer's*, 2s.; *Poole's Tons, &c.*, 2s. 6d.; *Holton's General*, 8s. 6d.; *Scoffern's Gold*, 3s. 6d.; *Renton's Grazier's*, 2s. 6d.; *Frenitis's Hop-planter's*, 2s. 6d.; *Marshall's Index*, 2s. 6d.; *M'Calloch's Land Measurer's*, 2s. 6d.; *Macheil's Customs Duties*, 2s. 6d.; *Dilton's Parish*, 4s.; *Poor Law Union*, 6s.; *Mallinson's Sharebroker's*, 5s. 6d.

REAPING.—Cutting down corn or pulse with a sickle, hook, or scythe, or by a reaping machine. The sickle is a light tool with a semicircular blade and a short handle; it generally has a notched or serrated edge, but sometimes it is made with a thicker back and broader blade, and with a smooth edge. In using either tool, the reaper takes handfuls of corn in his left hand and cuts through the straw with the instrument in his right; he then lays it carefully upon a straw-band, placed upon the ground, and proceeds to cut more, until a sufficient quantity has been cut to form a sheaf: it is

then bound up, either by the reaper himself, or a person called a "bandster," who follows for the purpose, and will bind up for several reapers; the latter is by far the most expeditious mode of proceeding. The sheaves being cut and tied up, are placed upright in stocks or shocks of twelve each, upon the middle of each alternate ridge; the sheaves should be bound firmly together, but not so tightly as to exclude the air, for the more freely they are exposed to the air the sooner they will be ready to carry. The sheaves, when placed on the stocks, should rest upon their butts with their ears leaning against each other, but the bodies of the sheaves should be sufficiently separated for the wind to blow through them. Wheat dries quickly, and may be carried in two or three days if the weather be favourable; but barley and oats require to remain longer on the ground; only ten sheaves, therefore, are placed on the stock of these latter crops, and two others are placed lengthways upon them, their butts touching, and the ears spread out and bent down so as to form a shelter to those placed upright. The manner of stocking, as generally performed, is as just described, but many other plans are adopted. Sometimes the sheaves are placed in a circular form with and without hooding, and at other times the sheaves are set up singly. In many cases the corn is made up into small ricks and remains on the field for a length of time, being temporarily thatched. Grain should not be cut when it is wet, as such practice may cause it to sprout, especially if the weather be warm. The oat dries more rapidly than other species, and loses less weight. It does not suffer so much from being cut damp. Reaping should not be commenced before the sun has exhaled the dew. Corn should always be cut as low as possible, that no straggling ears be lost, nor the most succulent part of the straw. The scythe has of late years been much introduced for the purpose of cutting of corn, and is becoming general. It requires considerable expertness on the part of the mower, and is very hard work. The common scythe is the one ordinarily used, but made rather more strongly than usual, and the handle is not made with so great a curvature as grass scythes. If the crops be light, the corn will not fall evenly over the scythe; a cradle is therefore fitted to it for the purpose of gathering the stems and laying the swathe down evenly. The cradle is made of three light ash rods fastened to two upright iron rods, which are attached to the outer end of the scythe by an upright stem, the whole strengthened by a backstay of iron. Reaping machines are of various construction, that seen in the engraving is known as Hussey's. Another implement, termed the Automaton Reaper, operates as follows. It cuts in the same manner as others; it is fitted with a reel for the purpose both of inclining the grain towards the platform preparatory to being cut, and bringing it when cut on to the platform. The knife-bar is on the upper side, in the middle of the blade, and as far forward as

the angles of the cutting will allow. The back part is cut zig-zag, and each alternate edge is levelled the other way and serrated. By this arrangement it is scarcely possible to choke, as the knife-blade resting on the



fingers, and the edges front and rear being in close contact with them, any matter accumulating upon the fingers will be picked off by the sharp points of either the front or rear edge of the knife. Sufficient corn for the sheaf having fallen on the board, a long arm comes round, carrying the rake, and falling across the entire bed of the machine, collects the grain into a compact bundle against a sheet-iron plate, and then, with a sheaf in the grasp, the rake and the iron plate immediately make a quarter-turn round to the hack of the machine, the rake-arm is caused to stretch out behind, relaxing its grasp, and the sheaf falls in the line of the horse-walk, out of the way of the horses the next round, and the rake-arm takes a sweep hack to its work. The gearing is compact and symmetrical, well boxed in, and protected from dirt. The team is relieved of weight and of the side draught, and it is also made to turn conveniently a square corner, which will be learned by a very little practice. The careful handling of the grain by the rake saves a small percentage over raking by hand. The length of cutting is regulated by a very simple arrangement, and the knife may be set close to the ground.

RECEIPT.—In law a written acknowledgement of money or other consideration having been received by one person from another. The uniform receipt stamp for all sums above £2 is now 1d, which must be paid by the person giving the receipt. The receipt may be either written upon stamped paper, or an adhesive stamp may be affixed to the paper upon which it is written; but in the latter case, the person giving the receipt must himself cancel the stamp, by writing his initials, or some portion of his signature, over it, before he delivers it,

under a penalty of £10. A receipt cannot be made valid afterwards by affixing a stamp. A person giving a receipt for money amounting to £2 or upwards, without a stamp, subjects himself to a penalty of £10; and if when £2 or upwards is paid, a less sum than £2 be specified in the receipt with the view to avoid the duty, or any other contrivance or device be used for the like purpose, a penalty of £50 will be incurred. A party refusing to give a receipt, incurs a penalty of £10. Any note, memorandum, or writing whatsoever, given upon the payment of money, signifying that an account has been discharged, or that money has been paid, or credit given, is a receipt liable to stamp duty. If, therefore, the person receiving the money write, or by means of a stamp, impress on any bill of parcels or invoice the word "paid," "settled," "balanced," "discharged," or any words of a like import, intended to signify the payment of money, he must at the same time, if the paper be not already stamped, affix thereto an adhesive receipt stamp, and cancel the same by writing his initials, or some portion of his signature thereon. If he omit so to do, he will incur a penalty of £10, and the memorandum will be of no avail to the person to whom it is given. Entries made by persons receiving money in pass-books kept by the persons paying the money are receipts; and for every such entry made without affixing a stamp, and writing over the stamp, as hereinbefore stated, when the payment amounts to £2 or upwards, a penalty of £10 is incurred. On every occasion when money amounting to £2 or upwards is paid, whether it be on a sale by auction, or other ready money dealing, or the payment of wages, or on a transaction of any other kind or description, if any receipt be given it must be on a stamp; and so, likewise, must a receipt for money paid on account. Receipts, discharges, or acknowledgments given upon payment made by or with bills, drafts, notes, or other securities, are receipts chargeable with stamp duties. Any receipt, therefore, given on such an occasion, or any memorandum signifying that a bill, note, or draft, or other security has been given or delivered in satisfaction or on account of any demand, must be stamped. Receipts written on promissory notes, bills of exchange, drafts, or orders for the payment of money, duly stamped, or upon bills of exchange drawn out of but payable in the United Kingdom, are exempt from duty. When money due upon a bill or note is payable by instalments, the payments may be written off on the back of the bill or note by the holder; but if a receipt be given to the person making any such payment, it must be stamped. Letters by post acknowledging the safe arrival of any bills of exchange, bank notes, or other promissory notes, or other securities for money, are exempt from receipt duties; but if the receipt of money be acknowledged, a stamp is required. When advice is given by letter to a person that money has been paid to his credit, a letter in return, merely

acknowledging the receipt of the letter containing such advice is not chargeable as a receipt; but any intimation that money has been received is liable. All documents or writings usually termed letters of credit are declared by law to be bills, drafts, or orders for payment of money, and chargeable with stamp duty as bills of exchange, drafts or orders. A letter of credit payable on demand must be on a penny stamp; but if the credit be not given until a specified day, or until advised, it is a bill of exchange payable after date, and must be stamped accordingly. Receipts for land tax, assessed taxes, and property and income tax, are exempted from duty. Physicians and barristers' fees are not liable to receipt duty, the money thus passing being a gift and not a payment.

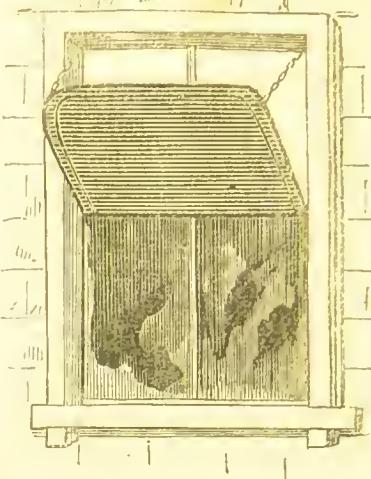
RECOGNIZANCE.—The law has provided a method for the prevention of crimes as well as punishing them when committed. This preventive justice consists in obliging persons whom there is reason to suspect of future misdeeds, to enter into a recognizance to keep the peace, or be of good behaviour. A recognizance is an obligation, with one or more sureties, entered into before a court of record, or magistrate duly authorized, to do some specific act, as to appear at the sessions, keep the peace, or the like. In default, the recognizance is forfeited, and the party and his sureties may be sued for the sums in which they are respectively bound. Justices of the peace may demand security at their own discretion, or it may be granted at the request of a private individual upon due cause shown. Wives may demand it against their husbands, or husbands, if necessary, against their wives. Justices may bind a person over for offences against good manners, as well as against the peace. With respect to the exhibition of articles of the peace, there ought to be a reasonable foundation on the face of the articles to induce a fear of personal danger, before sureties of the peace are required. The court may require bail for such a length of time as they may deem necessary for the preservation of the peace. A recognizance may be forfeited by the commission of any of those acts which the party is bound to refrain from; or it may be discharged either by the demise of the Sovereign to whom the recognizance is made, or by the death of the principal party; or by the order of the court to which it is certified; or in case he at whose request it is granted, if granted upon a private account, will release it, or does not make his appearance to pray that it may be continued. No recognizance can be extreated without the written order of the justice, recorder, corporate officer, chairman, or justices of the peace, to whom a list of forfeited recognizances must be submitted by the proper officer.

REDOWA.—A dance composed of three parts distinct from each other. 1. The pursuit. 2. The waltz called *redowa*. 3. The waltz à deux temps executed to a peculiar measure, and which by a change of the rhythm, assumes a new character. The

middle of the floor must be reserved for the dancers who execute the promenade called the pursuit, while those who dance the waltz turn in a circle round the room. The position of the gentlemen is the same as for the waltz. The gentleman sets out with the left foot, and the lady with the right. In the pursuit the position is different, the gentleman and his partner face, and take each other by the hand. They advance or fall back at pleasure, and balance in advance and backwards. To advance, the step of the pursuit is made by a glissade forward without springing; coupé with the hind foot, and jeté on it; you recommence with the other foot, and so on for the rest. The retiring step is made by a sliding step of the foot backwards, without springing; jeté with the front foot, and coupé with the one behind. It is necessary to advance well on the sliding step, and to spring lightly on the two others, *sur place*, and balancing equally in the *pas de pursue*, which is executed alternately by the left in advance, and the right backwards. The lady should follow all the movements of her partner, falling back when he advances, and advancing when he falls back. Bring the shoulders slightly forward at each sliding step, for they should always follow the movement of the leg as it advances or retreats; but this should not be too marked. When the gentleman is about to waltz, he should encircle the lady's waist as in the ordinary waltz. The step of the redowa in turning may be thus described: For the gentleman, jeté of the left foot passing before the lady. Glissade of the right foot behind to the fourth position aside, the left foot is brought to the third position behind; then the *pas de basque* is executed by the right foot bringing it forward, and you recommence with your left. The *pas de basque* should be made in three very equal beats, as in the mazurka. The lady performs the same steps as the gentleman, beginning by the *pas de basque* with the right foot. To waltz à deux temps to the measure of the redowa, the dancers should make each step upon each beat of the bar, and find themselves at every two bars, the gentleman with his left foot, and the lady with her right, that is to say, they should make one whole and one half step to every bar. The music is rather slower than for the ordinary waltz.

REFLECTOR.—An apparatus recently introduced for the purpose of superseding gas, &c., in the daytime, and diffusing daylight into all dark places, where it is impeded from the bad construction of premises, proximity of walls or buildings, or other local causes. The best reflectors are manufactured of indestructible, unburnable silver metal, shaped by machinery according to requirement, so as to impart both a refractory and diffusing power; the surface being covered with French gloss, and rendered air and waterproof—the duration of these reflectors will extend over a period of many years; the only expense to be incurred, after the original outlay, being merely that of painting the frames once a

year. The prices vary from £1 to £10 and



upwards, according to the quality and dimensions.

REGISTER OFFICES.—Establishments located in London and other large towns for the purpose of providing employers with servants, and servants with employers. The plan adopted is for the proprietor of a registry office to keep a book in which are entered the names, addresses, and specialties of parties who are seeking for situations, or who have situations to offer, and thus acting as a medium between the two. The person requiring a situation presents himself at the office, pays a small fee, and receives in return a list of names likely to suit his wants; should none of these answer his purpose, he calls again on the next and following days until he is successful. It will be readily understood that this mode of intercommunication, greatly facilitates the search made for the objects alluded to, and is of especial importance to those who are out of employment, and who cannot afford to waste either their time or their money. Great caution must, however, be observed in selecting an office of respectability, as some of this class have fallen into disrepute by conducting their business in a manner which is neither honest nor straightforward.

RELAXATION.—In order that the daily duties of life may be well and pleasantly performed, it is absolutely necessary that the ordinary routine of employment should be broken by occasional intervals of relaxation. No person can work continuously and unremittingly upon a set task for a protracted period of time, without prejudicing not only his own health, but the labour he is employed upon. And if there are instances on record of an amount of labour of almost superhuman extent being performed by one man, in a given space of time, the terrible sacrifices that have been made at the time.

and the consequences which have frequently resulted, ought to be sufficient to deter any one from following in the same path. Supposing even that no injury accrued from these unbroken spells of labour, on the score of saving of time, the system will be found defective. If a man work twenty hours to-day, he will probably not be able to work at all the following day, and on the next not more than five or six hours—making twenty-six hours in the three days; but if he worked ten hours the first day, he would be able to work for the same space of time on the second and third days, making in all thirty hours, or a gain of four hours in the three days. Carrying out this principle in a more extended form, it will be easily perceived that, as a general rule, the person who has his periods of relaxation will be enabled to work for more years than the incessant labourer, and thus extend his lifetime, not only for the operations of his mind and his hands, but also for the enjoyment of the comforts and pleasures of life which Providence has assigned him. In taking relaxation, one grand principle should be followed, in order to derive unalloyed advantage from it, and that is to divest the mind entirely from all thoughts, schemes, or plans in connection with everyday occupations, and to live and move only in those scenes which have been resorted to for the purposes of relaxation.

RELIEF, PARISH.—Commissioners of the poor law have to make regulations as to the relief to be given to able-bodied persons out of the workhouse; all relief given contrary to such regulations to be disallowed: but overseers or guardians may, under special circumstances, delay the operation of such regulation for thirty days, reporting within ten days after the cause of such delay to the commissioners. If commissioners approve of such delay, they may peremptorily fix a day, from which all relief granted contrary to these regulations shall be disallowed; still, in cases of emergency, relief may be given, provided a report of the same be made to the commissioners within fifteen days after, and they approve of such departure from their regulations. Where guardians, select vestries, or similar bodies have been established under this, or any other general or local act, no relief is to be given except as directed by them, subject to the control of the commissioners. But in sudden or extreme cases, overseers may give temporary relief to persons, whether settled or not in the parish, in articles of absolute necessity, but not in money. If overseers neglect or refuse to give such casual relief, justices may order it; and overseers disobeying such order are liable to a penalty of £5. Justices may also give an order, under like penalty, for medical relief in cases of dangerous illness. In any union formed under the Act, two justices may order relief to be given out of the workhouse to any adult person wholly unable to work, from old age or infirmity of body; but justices must certify in their order as to inability to work, and the pauper desire

such out-door relief. All relief given to a wife or children is considered relief given to the husband. A husband is liable to maintain the children of his wife born before marriage whether legitimate or illegitimate, till they attain the age of sixteen, or till the death of their mother; such relief as commissioners may direct to be considered as a loan, for which the wages of recipient may be subsequently attached in the hands of his employer. A married woman may be relieved, the same as a widow if her husband be beyond sea, in the custody of the law, or confined in a lunatic asylum; but not to affect future liability of a husband for such relief. A widow with a child dependent upon her, and not having had an illegitimate child since the commencement of her widowhood, may be relieved, though not in the parish of her legal settlement. An order for paying the whole or part of the cost of maintenance of a lunatic married woman, in any lunatic asylum, and chargeable to any parish, may be made upon her husband.

REMOVING HOUSEHOLD FURNITURE, PERSONAL EFFECTS, &c.—This is an undertaking of some importance, and requires to be conducted with great care and circumspection. If proper caution is used, little or no damage will accrue; but if, on the other hand, carelessness is displayed, several pounds worth of damage is likely to be the consequence. For several days previous to removal, various articles in different parts of the household should be consigned to their respective packages; then the crockery and glass should be carefully stowed away in hampers, packed in hay; in order that this may be performed properly, it will be as well to engage the services of a person to remove the furniture who is accustomed to this kind of work. This done, all ornaments, knick-knacks, and fancy articles should be packed in boxes by themselves, or stowed away in drawers. It is to be observed, however, that every package as it is closed should have the contents judiciously outside, so that, when the time of unpacking arrives, there need be no confusion or vain searching for some articles, the destination of which is uncertain. Perhaps the most comfortable way of removing is to send one portion of the things to the new abode a day or two previously to the remainder coming; this will afford time to set some of the rooms in order, and will economise labour and time. It will be found an excellent plan to have the carpets of the sitting-rooms already laid down, so that the various articles of furniture may be at once placed in their assigned positions without any after-moving; mirrors, looking-glasses, pictures, musical instruments, &c., should be placed in spring vans by themselves, to prevent the jolting motion from breaking, or otherwise injuring them. When a bedstead is taken down, the screws, nuts, &c., should be carefully placed away, so that they may be found in a moment; for the want of this forethought much delay and inconvenience is frequently occasioned. The various articles of bedding should be rolled up in the bed from which

they were taken, and the whole tied up in a soiled sheet or curtain: everything will be thus ready to the hand when it is wanted. All articles which are likely to be required for immediate use, upon arriving at the new abode, should be packed by themselves, and placed last in the van, so that they might be taken out and carried to some place handy for use. The best time to commence removing is very early in the morning, the job is then likely to be finished before dark sets in. If this cannot be done in that space of time, it is better to have an extra day or two, rather than allow the furniture to be damaged through being removed hastily in the dark. Removing is generally an expensive job; but there is a way of conducting it much more economically than is generally employed. Thus: a few days before the removal takes place, send for some respectable van proprietor in the neighbourhood, conduct him over the house, show him the articles to be removed, tell him where you wish them to be taken to, and ask him how much he will do the whole for. If he answer that he will do so as reasonably as possible, do not receive such reply, but tell him that you must have an understanding upon the point, and that, if he objects to this mode of business, you will send for some other person who will not object. This will, doubtless, have the desired effect, and you will, in all probability, get the business done much more expeditiously and cheaper than if it were left to the man to charge for vans, horses, and men at any rate that he should deem proper. If any of the van proprietor's assistants should display recklessness and carelessness in moving or carrying your furniture about, object to it at once, and give both the men and master to understand that you will not suffer your property to be destroyed from sheer wantonness.

RENNET.—A substance used in the making of cheese. To prepare it, take out the stomach of a calf as soon as killed, and well scour it inside and outside with salt, having previously cleaned it of the curd which is always found in it. Let it drain for a few hours, then sew it up with two handfuls of salt in it; or stretch it on a stick well salted; or keep it in the salt wet. When required for use, soak a portion of it, which may be employed several times by using fresh water.

RENT.—The sum of money or other consideration issuing yearly out of lands or tenements paid by the occupier to the owner. Rent is demandable and payable any time between sunrise and sunset. Under ordinary circumstances, rent is considered due every three months, upon one of the quarter days. Weekly or monthly rent is payable weekly or monthly; but if the parties let it run to a quarter, and it is then paid as a quarter's rent, the tenure will become a quarterly one. For the non-payment of rent on the day it is due, the law has furnished landlords with several methods of recovering it, the chief of which are:—1. By action of law. 2. By ejectment. 3. By distress on the premises. The last is

most commonly resorted to. Distress is a remedy given by the legislature to a landlord, by which he is empowered to seize the goods of his tenant on the premises, to sell the same within a certain period, and thus to reimburse himself for the rent in arrear, and the charges consequent on the distress. In general, all chattels found on the premises, whether the property of a tenant or a stranger, may be distrained. But dogs, rabbits, poultry, fish, or things of a wild nature; things on the premises in the way of trade, as horses at a forge, the cattle and goods of a temporary guest at an inn (but not carriages or horses at livery); the tools and implements of a man's trade in actual use; the books of a scholar, or the axe of a carpenter; wearing apparel, when upon the back; a beast at the plough, or a horse a man is riding upon; a watch in a man's pocket, pawnbrokers' duplicates, deeds, writings, or anything unsaleable; also loose money. None of these things can be taken by distress. To these heads of things not distrainable may be added all goods in the custody of the law whether as being already distrained or taken in execution; but, in the last case, so long as they remain on the premises, the landlord has a beneficial lien on them. Nothing can be distrained which cannot be returned in as good a state as when taken, as milk, fruit, and the like. Distresses must be proportioned to the sum distrained for. If a man take unreasonable distress, he may be heavily fined. Distress must be made in the day time, and not till the day after the rent is due. If made after the tender of money, it will be illegal: and though the tender be made after the distress, but before it is impounded, the landlord must deliver up the distress, and the expenses, if any, must be paid by him. The place where the distress is deposited in security, or, as it is termed, impounded, may be on such part of the premises as is most convenient; but, if the goods distrained are removed, notice must be given of the place where, and such notice contain an inventory of the goods distrained. When premises are held at will, or for less than seven years, and possession is legally determined, and there is no rent, or the rent is under £20, a constable may give possession after notice and application to a magistrate. Any constable of the Metropolitan Police Force may stop and detain, until inquiry has been made, all carts and carriages employed in removing the furniture of any house or lodging between the hours of eight in the evening and six in the morning, or whenever the constable has good grounds for believing such removal is made for the purpose of evading the payment of rent. In the case of landlord and tenant, where half a year's rent is in arrear, and the landlord or lessor has a right to re-enter for non-payment, he may bring a writ of ejectment; and, on proof that there were not sufficient goods to satisfy distress, he shall recover judgment and execution; but on the tenant's paying all rent and costs before trial, the proceedings are to cease. The landlord's former remedies, however,

are saved. Where a tenant at rack-rent, or at full three-fourths of the yearly value, deserts his premises, being half-a-year's rent in arrear, without leaving sufficient distress—and though a man is in possession—two justices may, after fourteen days' notice publicly affixed on the premises, put the landlord in possession; and the lease, if any, is afterwards void.

REPORTER.—A person employed in a literary capacity on the public journals, to give an account of various events which transpires at the time are taken in shorthand by the reporter, and re-written by him at a subsequent period. The qualifications for a reporter are a quick ear, a ready apprehension, and a facile hand. In addition to this he should be a person of gentlemanly bearing and good address, as these are likely to procure him admission into places, where it is necessary to use a little persuasion to gain admittance. The income of a reporter almost wholly rests with himself; if he is active and energetic, and really proficient, he will be able to earn a very respectable livelihood.

RESERVOIR.—A conservatory of water. The husbanding of water is now becoming a subject of peculiar interest to the agriculturist. This arises from its scarcity in many districts, in consequence of the improved drainage of the land, and from the many uses to which machinery may be applied in farming operations by the agency of water power. The construction of reservoirs must resolve itself into the following heads:—first, where a sufficient quantity of water can be diverted directly from the channel of a stream or river. Second, where the supply is to be obtained from drainage, which maintains a stream during part of the year, but which stream fails during the summer months. Third, where there are grounds affording a favourable situation for the construction of a reservoir, but through which there is no natural stream passing. Previous to the formation of a reservoir, the following conditions must be taken into consideration: the annual average fall of rain and dew balanced against the evaporation; the extent of ground from which the water is to be derived; the supply and purposes for which it is required, and whether the country is liable to heavy floods. The following substances will be necessary for the embankments:—grout, a thin description of very old mortar, sufficiently fluid to run into the irregular spaces between the stones in rough facings. Concrete, or artificial stone, which is a compound of coarse and fine gravel with about one-sixth or eighth part of slaked lime and water, laid in regular layers of six inches in thickness, each layer being grouted and instantly hard rammed down. Sheet piling, which is formed by driving flat stakes into the ground, having their edges placed close together, and which should be from eight to twelve inches broad. If they are always under water, beech wood will be found well calculated for this purpose, and it should be charred. Lastly, puddles

of moistened and well-pounded clay, laid down in layers.—See POND, TANK, &c.

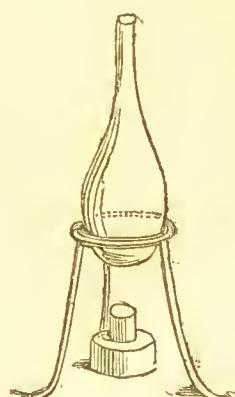
RESINS.—Vegetable juices, which are solid, are not soluble in water, but dissolve in alcohol; they are generally brittle, and more or less transparent. The resins best known and which are used in medicine, are left after the distillation of the essential oil of turpentine; they vary in appearance, according to the mode in which the distillation has been conducted. Resin is only used in medical practice, at present, as an addition to plasters.

RESPIRATORS.—Instruments employed to protect the air-passages from the direct effect of the atmosphere, more especially when it is misty and cold. These instruments are without doubt beneficial in many cases. The principle on which they are constructed, is that the warm breath passing out from the lungs, should impart its heat to a number of small closely set wires, this heat being taken up at the next inspiration, by the cold air, in its passage through those wires to the lungs. Thus in many cases of chest affection, these instruments furnish a means of protection of the highest value, particularly for those, who, suffering from delicacy of the lungs, cannot, by reason of their avocations, avoid exposure after night-fall or to cold or foggy air of any kind. When a means of protection only is required, it may be obtained by placing some article across the mouth on the same principle as the respirator.

RETORT.—Vessels used for distilling on a small scale. The materials are put into the retort, to which heat is applied; and the fluid distilled, after rising in vapour and condensing, pours into a receiver, which is kept cool. The thin pint Florence flasks, in which we receive olive oil from Italy, are extremely useful for many operations where heat is employed, as their thinness enables

them to resist sudden changes of temperature better than our flat-glass flasks; but they should be chosen as free as possible from knots and flaws, and should be carefully handled, as they are not strong. The engraving represents boiling in a flask, placed upon a stand made of thick wire. The flasks when got from oilmen are generally oily. They may be

cleaned by putting a little alkali in the water to wash them; but it is better to pour in a little strong nitric acid, or some oil of vitriol, and then heat them over a lamp; after this everything will come away, on washing with water.



RETRIEVER.—A species of dog which owns no fixed parentage, but may be generated by any congenial varieties, as the spaniel and Newfoundland, the spaniel and



poodle, &c. One parent, at least, should be stiffly coated, tough skinned, and moderately high on the leg; and it is also essential that both parents be hardy, of excellent scent, and zealous in the pursuit of game. It is of the first consequence that the retriever be under such command, as never to stir in pursuit of any game until a signal is made for him to start. It is not so difficult as might be supposed, so to break and tutor a dog of mixed breed, that he should make a moderate pointer, a still better setter, and a handy hunter in cover in pursuit of wounded game.

RHEUMATIC GOUT.—The disease which is sometimes erroneously called by this name, is rheumatic fever; and the local affection of the toes and feet still more generally believed in, is nothing more than rheumatism attacking the smaller joints, where, from the extreme pain, the soothing system is found more conducive to recovery than the stimulating; that is fomentations of chamomile and poppy-heads, and the occasional employment of doses of laudanum, from fifteen to twenty drops, two or three times a day.

RHEUMATISM.—A very painful disease which affects the muscles and joints of the human body, chiefly the larger joints and most important muscles, as those of and around the shoulder, hip, knees, and back. Rheumatism is divided into acute and chronic; or that condition, when the disease is in vigour and freshness attended with extreme pain, and more or less of general fever, and that state, when the system, by long acquaintance with the disease, has become familiar to its attack, and it comes on from any trifling exposure to cold, and after affecting a larger or smaller surface, declines of its own accord—all the symptoms, however, being materially lighter than in the acute state. Besides being acute and chronic, rheumatism is very often both general and local, and this, under both the previous conditions, and the diseases known as lumbago and sciatica, are merely forms of acute or chronic *local* rheumatism.

ACUTE RHEUMATISM, OR RHEUMATIC FEVER, is a disease which, in many of its

symptoms, strongly resembles inflammatory fever, and usually commences after the languor, restlessness, and shivering, which precede all febrile actions, and is attended with great heat, much thirst, headache, a quick bounding pulse, white tongue, constipated bowels, and acute pain either confined to one or two parts, or more generally diffused over the body. There is at the same time an oppression in the breathing, the abdomen is often tense and tumid, and the secretion from the bladder, scant, and of a deep red colour; while, from the surface of the body a perspiration breaks out, which, though unattended with relief, by its peculiar acid smell defines the disease, and affords a good diagnosis, before asking the patient a single question. Upon entering the room the air seems redolent of stale vinegar, and this fact, while helping the physician to a suggestion of the disease, serves to define the attack from inflammatory or any other form of fever. Another characteristic and distinctive symptom of this disease, is the increase of pain in the course of the muscles on any attempt to move the patient into another position. The symptoms, if from the first unrelieved, gradually increase in intensity; and the pulse in such cases becomes, in addition to its velocity, hard and jerking. In all cases the symptoms are aggravated at night, and remit their violence in the morning. The pain though sometimes intense, is not always continuous, it is often only partial in its situation, and sometimes abates for hours, but in all cases it is the *last* symptom the patient loses. The disease after a course of from fifteen to thirty days subsides, often leaving one or more members in a state of chronic tumefaction.

The causes that induce rheumatic fever, are generally exposure to cold damp air, or transitions from a warm moist atmosphere into a cold or wet one, and the period most liable to an attack that of youth and vigorous manhood, the full-bodied and the active, rather than the spare and the torpid; and men more frequently than women. The only other disease with which rheumatism can be confounded, is gout, and from this it can always be known by the indigestion and little constitutional disturbances which always precede gout; and lastly, by that disease attacking the *small joints*, as the toes or fingers, instead of, as in rheumatism, the shoulder, knee, or hip.

Treatment.—Bleeding has always been regarded as the chief if not sovereign remedy in this disease; but as depletion is known to favour that dangerous state known as *metastasis*, or a sudden removal of the disease from one part to another; and, not infrequently, from the surface to some internal organ, bleeding should, therefore, if possible, not be repeated, the physician depending upon other means to effect the depletion necessary. Indeed, in many cases, the extraction of blood from the system is quite uncalled for, as all its benefits can be obtained by less serious, and equally efficacious remedies, and by adopting the following mode of treatment—one that will generally be found sufficient to render the lancet quite

unnecessary; or should bleeding in the first stage have been adopted, it may be employed with equal advantage after; only in that case, it will be less requisite to give the aperient pills in such large doses. Take of

Powdered nitre	1 drachm.
Tartar emetic	4 grains.
Camphor water	10 ounces.
Laudanum	2 drachms.

Mix. Give two large tablespoonfuls every three hours, apply a bottle of hot water to the feet, and administer two of the following pills an hour after the first dose of the mixture, and one every six hours after, till an effectual action is excited in the bowels, when they are to be discontinued. Take of

Compound extract of cocoynth	1 scruple.
Calomel	15 grains.
Camphor, powdered	4 grains.
Croton oil	2 drops.

Mix thoroughly together, make into a mass, and divide into six pills. Should the pain continue excessive, and the patient be debarr'd from sleep by the nightly exacerbation, either twenty-five drops of laudanum, in half a wineglass of water, with a tea-spoonful of spirits of sweet nitre, is to be given to him, if an adult, at bed-time; or else ten grains of the Dover's powder in a little gruel; and should it be required (one or the other), repeated at night for two, three, or more occasions, as may be needed; the patient, during the day, reverting to the mixture and an occasional pill, sufficient to excite one or two actions in the twenty-four hours. Thin gruel, lemonade, or linseed tea as a diluent, are to be used frequently to quench the thirst, and a diet of the least solid or exciting kind established till all the febrile symptoms are subdued. After a lapse of from four to twelve days, the inflammatory stage, or the acute form of the disease, will generally have been passed through; after which, the treatment assumes a different form, such as is described under the head of CHRONIC RHEUMATISM, though this term strictly signifies a disease of considerable standing; for the sake of perspicuity, that condition of the system existing at the termination of the acute form, has been classed under it, which, though not correct as to fact, is perfectly so as respects treatment, which is analogous in all conditions not attended with inflammatory fever. In chronic rheumatism the inflammation and the pain are both confined to the locality or part, and the object of the treatment is to allay that pain by reducing the inflamed condition of the muscle or member. This is effected either by internal remedies, or what are called constitutional means, or through friction, by producing counter-irritation, or an artificial inflammation in the parts of the body immediately above the suffering place; or else by a judicious blending of the two modes of practice.

When the fever, or the acute stage has been subdued by the means already mentioned, and a part of the body remains

swollen and tender, or when in old cases this condition comes on without other symptoms, the following mixture is to be given, and the part carefully guarded from the cold.—Take of

Solution of acetate of ammonia	2 ounces
Wine of colchicum	$\frac{1}{2}$ ounce
Syrup of saffron	2 drachms
Camphor water	$3\frac{1}{2}$ ounces

Mix, and give a tablespoonful every three hours, and one of the following pills every night an hour before bed-time.—Take of

Ipecacuanha	3 grains
Acetate of morphia . . .	1 grain
Liquorice powder . . .	10 grains

Mix well, form into a mass with conserve, and divide into six pills.

When the health is debilitated, and the appetite defective, a grain of quinine made into a pill may be taken an hour before each meal for a succession of days. If this course is not marked with early benefit it will be necessary to employ friction, which may be carried on concurrently with the medicine, and the best agent for this purpose is the camphorated oil, which is to be rubbed gently but steadily in with the hand for several minutes three times a day, after a few days, or in old standing rheumatisms, increasing the strength at first by adding a third part of turpentine to the camphorated oil, and finally another third of spirits of hartshorn. Mustard plasters and even blisters are sometimes employed in cases of inveterate rheumatism, but the steady and judicious use of a stimulating embrocation with a hot bath, friction with the flesh brush, warm clothing and exercise, will in almost every case cure a chronic rheumatism without the necessity of either rubefacient or blister.—See EMBROCATION, LUMBAGO, and SCIATICA.

RHO DODENDRON.—A genus of highly-prized evergreen shrubs, which, in addition to the beauty of the foliage, bear large and showy flowers. All the species thrive best in a fresh soil mixed with sand,



in a moderately shaded damp situation, with an eastern or northern exposure; they may be propagated by seed, by layers, or by cuttings. The seed is either procured

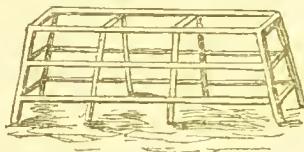
from Amerlea, or sown in this country; it is of very small size. Early in spring the seed is sown in pans of peat earth, which are then placed in the shade, or in winter put under a cold frame for protection. As soon as the plants fairly come up, they must be pricked out into pots or beds; and after two years, they are to be again transplanted into wider spaces, where they may remain till required for their final destination. They commonly flower from the fourth to the seventh year of their age. In raising from layers the young shoots only are used, which may be laid down in June and July, when in full growth, or in autumn. By the former plan, a year is gained, as the shoots will be rooted, and may be removed by the succeeding winter or spring; although some kinds require two years to form a sufficient number of roots. The plants when removed may be put into beds, and protected during the first winter with mats.

RHUBARB COMPOTE.—Take a pound of the stalks after they are pared, and cut them into short lengths; have ready a quarter of a pint of water boiled gently for ten minutes with five ounces of sugar, or with six, should the fruit be very acid. Put it in, and simmer it for about ten minutes. Some kinds will be tender in rather less time, some will require more.

Rhubarb, 1lb. ; water, $\frac{1}{2}$ pint ; sugar, 5 or 6ozs.

RHUBARB, CULTURE OF.—There are several species and varieties in cultivation of this plant. All sorts may be raised either from seed or by dividing the roots. If from seed, which is the best mode, sow in light deep earth in spring; and the plants, if kept eight or nine inches asunder, will be fit for transplanting in autumn, and for use next spring. When the roots are divided, care must be taken to retain a bud on the crown of each section; they may be planted where they are finally to remain. When a plantation is to be made, the ground, which should be light and rather sandy, but well manured, should be trenched three spits, or as deep as the subsoil will admit, adding a good manuring of well rotted hotbed dung. Then plant in rows three feet wide by two feet in the rows. When manure is applied, it should be buried not less than from two to three feet, that the extremities of the roots may derive benefit therefrom. The plants should be set out singly, and not in threes, as is so often done. For the first year the ground between the rows may be cropped with lettuce, turnips, or similar low-growing crops; but after the second year the leaves will cover the whole space, and require it also for their full development. From the depth to which the roots extend subsequent manurings will have little effect upon them; therefore, in preparing the ground for a new plantation, it should be enriched to the depth recommended above; and if a liberal supply of broken bones be incorporated with the manure, so much the better, as they consume slowly. The after culture required is very little more than

keeping the ground free from insects, occasionally stirring it during summer with a three-pronged fork, and adding a dressing of well-rotted manure every autumn and spring, stirring in the earth as deep as possible. Such a plantation will continue good for many years. Some cultivators never allow the flower-stalks to produce flowers, and others ent them over as soon as they have done flowering, to prevent the plants from being exhausted by the production of seeds. The former seems the preferable method, as the flower-stalks of plants cannot, like the leaves, be considered as preparing a reserve of nourishment for the roots. For forcing rhubarb, plant a single row three feet apart on ground that has been trenched two spades deep and dressed with well-putrefied dung at the time. The forcing may commence in December: first cover either with sea-kale or common garden pots (twelves), but chimney pots are still better, the leaf-stalks becoming much longer and finer, and envelope them with fermenting dung. A frame is much less objectionable, formed by driving stakes into the ground on each side of the bed alternately with the plants. These are to be three feet high above ground, and the space between the two rows of stakes two feet at the bottom, but approaching each other and fastened by cross pieces, so as to be only fifteen inches apart at top. To the sides and top stout laths are fixed, as in the accompanying engraving, to prevent the manure falling on the plants. The dung may be either fresh, or that which has already undergone fermentation, placed all round the frame eighteen inches thick, and the top covered with long litter. The temperature in the



interior should have a range of from fifty-five to sixty degrees. If it rise higher, two or three large holes made through the top soon correct it. Rhubarb may be forced without extra pots or frames, by merely covering the plants six inches deep with light litter, care being taken that the plants are not injured. Another mode of forcing is to place in the winter as many plants as necessary in large deep pots, each pot receiving as many as it can contain, and the interstices entirely filled up by fine sandy loam washed in. The tops of the roots are placed on a level with each other, and about an inch below the surface. These being covered with inverted pots the same size, may be placed in a viney or hotbed, and on the approach of spring any time after January, any room or cellar will be sufficiently warm. If copiously supplied with water, the plants will vegetate rapidly and vigorously, and each pot will produce

three successional cuttings, the first two being the most plentiful. As soon as the third is gathered, the roots may be changed, and those removed replanted in the ground, when they will attain sufficient strength to be forced again in a year's time. If not, it is of little consequence, for year-old roots raised from cuttings, or even seed sown in autumn, are sufficiently strong for use. In gathering the crop, during the second year after planting, a few of the largest and first-formed leaves, with their foot-stalks attached, may be gathered for use; but the gathering should not commence too early in the season, because in that case the plants would be weakened. From the third year as long as the plantation lasts, it may be gathered with freedom. A plantation in a good soil, and not over much deprived of its foliage, will last from ten to fifteen years; but the former period is more consistent with good management, because plants under that age will be more vigorous, and this will admit of a rotation taking place in the ground. When the leaves are about half expanded, they may be taken off for use; but where the largest returns are expected, as in the ease of market-gardens, they should be allowed to attain their full size. In removing them, they should be pulled off close to their base, and not cut, to prevent an unnecessary escape of sap, which in all succulent plants flows more copiously from a clean cut than from one slightly lacerated or torn; the foot-stalks should then be separated from the leaves, and tied up in bundles of from six to twelve each, in which state they are fit for the kitchen. Seed may be obtained frequently from two year old plants, and always from three year old. It must be gathered as soon as ripe, and great care taken that none is scattered over the beds, for the plants thence produced often spring up, and greatly injure the old plants by growing unobserved amongst them.

RHUBARB DUMPLINGS.—Line a tin basin with a plain suet crust, and fill with the fruit. Pinch in the paste, tie a floured cloth over the basin, and boil them for two or three hours; then turn out.

RHUBARB FOOL.—Seal a quart of rhubarb, carefully peeled, and cut into pieces an inch long; pulp it through a sieve, sweeten, and let it stand to cool. Put a pint of cream or new milk into a stewpan, with a stick of cinnamon, a small piece of lemon-peel, a few cloves, coriander-seed, and sugar to taste; boil for ten minutes. Beat up the yolks of four eggs, add a little flour, stir up the cream, set the whole over the fire till it boils, stirring in the meantime. Remove and let it stand till cold. Mix the fruit and cream together, add a little nutmeg, and serve.

Rhubarb, 1 quart; cream or milk, 1 pint; cinnamon, 1 stick; lemon-peel, small piece; cloves and coriander-seed, to flavour; sugar, to taste; eggs, 4 yolks; flour, to thicken; nutmeg, to flavour.

RHUBARB PASTY.—Make a hot crust, with dripping or lard melted in boiling water; roll it out quickly, and stamp it so

as to be of a semicircular form when turned over. Lay rhubarb in the crust, with sugar to sweeten; add a little ginger; double up and pinch the crust; trim the edges, and bake the pasties in a moderate oven. If there be ice at hand, they may be iced.

RHUBARB PIE.—Peel off the skin from stalks of young rhubarb, and cut them obliquely into pieces of about an inch and a half. Some kinds need no peeling. Stew them slowly in sugar, or in butter, and a little water till soft; sweeten and make them into a covered pie.

RHUBARB PRESERVED.—Take a quart bottle with a wide neck, and cut the sticks of young rhubarb small enough to go into the bottle; add powdered loaf sugar, and tie a piece of bladder tight round the neck; put as much water into the copper as will immerse the bottle, and make the water to boil just over the bladder; then rake out the fire and let the bottle remain till cooled; take them out and place them on a dry shelf.

RHUBARB PUDDING.—Put several sticks of rhubarb, peeled, into a stewpan, with the rind of a lemon, a stick of cinnamon, two cloves, and as much moist sugar as will sweeten it. Set it over the fire, and reduce it to a marmalade; pass it through a hair sieve; then add half a nutmeg grated, a quarter of a pound of fresh butter, the yolks of four eggs, and the white of one. Mix all well together; line a pie-dish with good puff paste, put in the mixture, and bake it for half an hour.

Rhubarb, sufficient; lemon, rind of 1; cinnamon, 1 stick; cloves, 2; sugar, to sweeten; nutmeg, half of 1; butter, $\frac{1}{4}$ lb.; eggs, 4 yolks, 1 white.

RHUBARB SHERBET.—Boil six or eight sticks of peeled rhubarb for ten minutes in a quart of water; strain the liquor into a jug, in which is the peel of a lemon cut very thin, and two tablespoonfuls of clarified sugar. Let it stand for five or six hours, and it will then be fit to drink. In summer this will be found a very refreshing and agreeable drink.

RHUBARB SOUP.—Peel, clean and blanch a bundle of rhubarb, cut the stems into inch lengths, and put them to two quarts of good veal or beef gravy, with two or three onions, a few thin slices of bread, crust and crumb together, salt and pepper; skim off all the fat and scum; simmer till tender; steam and serve with toasted sippets.

RHUBARB TART.—Strip off the peel, and if the rhubarb is large cut it into two or three strips, and then into pieces about an inch long; sweeten well with brown sugar, and cover the dish with paste.

RHUBARB WINE.—Take five pounds of rhubarb cut into small pieces; add a gallon of cold water, and put it into a tub for eight or nine days, stirring it well two or three times each day. Strain, and to every gallon add four pounds of loaf sugar; the juice and half the rind of a lemon; put it in a cask with half an ounce of isinglass, dissolved in a little of the liquor; a gill of brandy may be added. Bung the cask

closely for a month, and bottle in ten or twelve months more.

Rhubarb. 5 lbs.; water, 1 gallon; sugar, 4 lbs. lemon, juice of 1, rind of $\frac{1}{2}$ of 1; isinglass, $\frac{1}{2}$ oz.; brandy, 1 gill.

RHUBARB, MEDICINAL. — Rhubarb is an astringent, stomachic, and purgative. In small doses its operation is principally or wholly confined to the digestive organs; in larger quantities, it first acts as a mild aperient, and afterwards as an astringent; hence its value in diarrhoea. *Dose.*, as a stomachic, five to eight grains; as a purgative, fifteen to thirty grains. It is most effective when chewed, or in the form of powder produced by grating it.

RIBS, BROKEN. — Few parts of the anatomy are more liable to fracture than some of the twelve small bones constituting the ribs and cage for the vital organs of the thorax; and but for the admirable manner in which each bone is shaped, and the whole are united behind to the spine, and forward to the sternum, or breast-bone, they would be endangered by every trivial accident. As it is, though often broken by a sudden force, they are, in certain positions of the body, enabled to resist with impunity an impetus that in another situation would splinter or stave them in. The accidents that most frequently lead to the fracture of the ribs are, sudden blows given obliquely from the side, a kick from a horse hoof, or falling on the side or face over a log of wood or tree, on the edge of a step, or any sharp and narrow elevation. The ribs are seldom broken near either of their extremities, but almost always where the bone is most convex. Though the fracture is occasionally jagged, it is much more frequently simply transverse, and merely requires to be placed in position to cause it to reunite. The ribs most liable to be broken are the fourth, fifth, and sixth; the first three are too firmly united with the adjacent parts, and at the same time too far removed from the kind of danger to which the others are exposed; while the last five, being only by cartilage with the breast-boue, offer no resistance to an injury, and consequently escape without accident. It is sometimes impossible to discover a fractured rib, from there being no depression to indicate the point of severance, and it is only by the difficulty of breathing and the smarting pain over the spot which received the injury, that the fact is known. This, however, is a matter of very little consequence, as the same treatment is employed whether the ribs have received a fracture or are merely bruised. A broken rib is indicated by an acute smarting pain in the side, which increases with every inspiration made. Occasionally when the ribs are broken from the passage of a wheel over the chest, the bone is splintered, the sharp fragment wounding the pleura, or lungs, and causing a dangerous hemorrhage; in which case the patient must be at once bled, a full dose of laudunum exhibited, the side bandaged, and the person placed on his back in bed. Formerly it was customary to envelop the whole chest and shoulders in convolutions of bandages, but

this is now quite exploded, as troublesome and unnecessary. All that is requisite is a broad flannel girth, deep enough to cover the ribs, and which is to be passed quite round the chst, and stitched with thin twine up the front, and drawn so tight as to keep the ribs stationary; two broad pieces of tape are then to be attached to the top of the flannel at the back, and brought crossed over like a pair of braces, and sewed in front, to keep the bandage from slipping down. If the pain is very severe it will be necessary to bleed to the extent of ten or twelve ounces, and from fifteen to twenty drops of laudanum given in a little water every four hours, if the pain demands the repetition. Rest must be strictly enjoined, and the patient advised to draw short inspirations, so as to avoid as much as possible calling the ribs into action. The bandage should not be removed, if possible, till the bones have reunited, which will generally require three or four weeks to effect completely.

RICE BALLS. — To a quarter of a pound of rice add a pint and a half of milk, and boil it with a little cinnamon, sugar, and lemon-peel, until it is quite tender; allow it to remain till cold, and then make it into balls. Beat up an egg, and roll the balls in it, and afterwards in grated bread crumbs. Fry them in lard, drain them on a piece of paper, and serve them up strewed with sifted sugar.

RICE BIGNETS. — In a pint of new milk simmer three ounces of rice till it becomes a stiff paste; add half a teacupful of thick cream, the grated rind of half a lemon, two ounces of loaf sugar, and a little powdered cinnamon, mace, and nutmeg, and two eggs well beaten; grate a small teacupful of bread crumbs; when the rice is cold, cut it into bits and roll it into small balls, dip each in the yolk of an egg, roll in the bread crumbs, and fry them quickly; serve with curried sauce.

RICE MILK. 1 pint; rice, 3ozs.; cream, $\frac{1}{2}$ teacupful; lemon-rind, $\frac{1}{2}$ of 1; sugar, 2ozs.; cinnamon, mace, and nutmeg, to flavour; eggs, 2; bread crumbs, 1 small teacupful.

RICE BISCUITS. — Mix together three pounds of wheat flour and one pound of rice flour. Put the whole in a pan, make a hole in the middle, rub in by degrees a pound and three-quarters of loaf-sugar and half a pound of butter; make the whole into a dough, add three-quarters of a pint of milk, with an egg. Roll out the dough into a sheet, about the sixth of an inch thick, cut out the biscuits with a plain round cutter about three inches in diameter; rub over the tops with milk, and throw them into rice flour, place them on buttered tins, and bake in a moderate oven.

RICE WHEAT FLOUR. Wheat flour, 3lbs.; rice flour, 1lb.; sugar, 1 $\frac{1}{2}$ lb.; butter, $\frac{1}{2}$ lb.; milk, $\frac{1}{2}$ pint; egg, 1.

RICE BLANC MANGE. — Stir three tablespoonfuls of finely ground rice into three gills of new milk; add loaf-sugar to sweeten, taking care not to put too much, or it will prevent the mixture settling. Flavour it with lemon-peel or almond essence; set it on the fire, and let it boil thoroughly.

stirring it and beating it extremely well for rather more than half an hour, and then pour it into a mould that has been soaked in cold water.

Rice, 3 tablespoonfuls; milk, 3 gills; sugar, to sweeten; lemon-peel or almond essence, to flavour.

RICE BOILED.—Rice may be boiled in a variety of ways. 1. Wash a cupful of rice in salt and water, and in two or three fresh waters; then set it over the fire in plenty of boiling water, and boil it (uncovered) as fast as possible, ten or fifteen minutes will do, when it will be tender. Drain off the water, and put the rice into a cullender before the fire to dry, lightly pricking it with a fork occasionally. Each grain will be dry and separate, and the whole beautifully white. Keep it hot till used, if possible before the fire, but do not cover it. 2. Wash as much rice as is required in two waters. Throw it into sufficient boiling water, and boil till three parts done, when drain. Butter the inside of a stewpan, into which put the boiled rice; fix the lid tight, and set the stewpan on a trivet in a warm oven until the rice is quite tender. 3. Boil the rice in water in the proportion of three pints to half a pound. When getting soft drain off half the boiling water, and replace it with cold. Add salt, shake the rice briskly to separate the grains. When done, drain off the water, and place the rice before the fire to swell and dry. 4. Pick the rice carefully, and soak it in cold water for a quarter of an hour; strain, and put it into boiling water, which should rise three inches above the rice. Cover, and boil for six minutes, skimming when necessary. Add a gill of sweetened milk for each pound of rice, and in two minutes more remove the saucepan from the fire; strain without squeezing; return it dry into the pot, and place it over a slow fire; pour over it half an ounce of melted butter mixed with a tablespoonful of the hot water in which the rice was boiled, and in six minutes it will be ready for table. 5. The following method of boiling rice applies especially when it is intended for curries, mulligatawny, soups, &c. Choose Patna or small-grained rice in preference to any other. Take out the unhusked grains, wash the rice in several waters, and put it into a large quantity of cold water; bring it gently to boil, keeping it uncovered, and boil it softly for fifteen minutes, when it will be perfectly tender, and every grain will remain distinct. Throw it into a capacious cullender, and let it drain for ten minutes near the fire; should it not then appear quite dry, turn it into a dish, and set it for a short time into a moderately heated oven, or let it steam in a saucepan near the fire. It should not be stirred except just at first, to prevent its lumping while it is still quite hard, nor should it be touched with either fork or spoon; the stewpan may be shaken occasionally, should the rice seem to require it, and it should be thrown lightly from the cullender upon the dish. A couple of minutes before it is done, throw in some salt, and from the time of its beginning to boil remove the scum as it rises.

RICE BREAD.—Boil a pound and a half of rice gently over a slow fire in three quarts of water for about five hours, stirring it, and afterwards beating it up into a smooth paste. Mix this while warm with four pounds of wheat flour, adding at the same time the usual quantity of yeast, allow the dough to work for a certain time near the fire, after which divide it into loaves, and it will be found when baked to produce twenty eight or thirty pounds of very excellent white bread.

RICE BUTTERED.—Swell the rice till tender in new milk. Pour off the thick milk, and add melted butter, sugar and cinnamon. Serve hot.

RICE CAKE.—Mix half a pound of sifted rice-flour with half a pound of loaf-sugar sifted, and put to this six eggs well whisked and strained. Season with a little ratafia and orange flower water, two drops of essence of lemon, some finely-grated rind of lemon. Beat the whole together for twenty minutes, and bake in a quick oven.

Rice flour, $\frac{1}{2}$ lb.; loaf sugar, $\frac{1}{2}$ lb.; eggs, 6; ratafia and orange-flower water, to flavour; essence of lemon, 2 drops.

RICE CAKES.—Whisk well six yolks and two whites of eggs; then, with a wooden spoon, beat in six ounces of finely-pounded loaf sugar, add half a pound of sifted ground rice, and two tablespoonfuls of orange-flower water, and just before the mixture is put into the tins, stir into it six ounces of fresh butter melted; dust the patty-pans with flour, and rub them with butter; let them be half filled, and bake the cakes in a quick oven.

Eggs, 6 yolks, 2 whites; sugar, 6 ozs.; ground rice, $\frac{1}{2}$ lb.; orange flower-water, 2 tablespoonfuls; butter, 6 ozs.

RICE CASSEROLE.—Wash half a pound of the best rice, drain it on a hair sieve, put it into a very clean saucepan, and pour on it a quart of cold new milk. Stir them well together and place them near the fire, that the rice may swell very gradually; then let it simmer as gently as possible for about half an hour, or until it begins to get quite tender; mix with it two ounces of fresh butter and two ounces and a half of pounded sugar, and let it continue to simmer softly until it is dry, and sufficiently tender to be easily crushed to a smooth paste with a wooden spoon. Work it to this point, and then let it cool. Before it is taken from the fire, scrape into it the outside of some sugar which has been rubbed upon the rind of a fresh lemon. Have ready a tin mould well buttered in every part; press the rice into it while it is warm, smooth the surface, and let it remain until cold. Dip the mould into hot water to loosen the contents, turn out the rice, and then again reverse it on a tin or dish, and with the point of a knife mark round the top a rim of about an inch wide; then brush some clarified butter over the whole pudding, and set it in a brisk oven. When it is of an equal, light golden brown, draw it out, raise the cover carefully, where it is marked, scoop out the rice from the inside, leaving only a crust of about an inch

thick in every part, and pour into it some preserved fruit warmed in its own syrup, or till it with a compote of plums or peaches.

RICE three, $\frac{1}{2}$ lb.; milk, 1 quart; butter, 2 ozs.; sugar, 2 ozs.; lemon, rind of 1.

RICE CAUDLE.—This may be made with water or milk; when it boils, add some ground rice, previously mixed smoothly with a little cold water; boil till thick enough, when sweeten it, and grate in nutmeg, or add a little powdered cinnamon.

RICE CHEESECAKES.—Boil four ounces of ground rice in milk, with a blade of cinnamon; put it into a pot, and let it stand till the next day. Mash it finely with half a pound of butter; add to it four eggs, half a pint of cream, a nutmeg grated, a glass of brandy, and sugar to sweeten. Bake in a moderate oven.

RICE Rice, 4 ozs.; cinnamon, 1 blade; butter, $\frac{1}{2}$ lb.; eggs, 4; cream, $\frac{1}{2}$ pint; nutmeg, 1; brandy, 1 glassful; sugar, to sweeten.

RICE CREAM.—Soak three ounces of rice over night in water for a short time, then drain it in a sieve. Next morning partially pound it, and slightly boil it in half a pint of milk; then put it into a basin to cool; add half a pint of cream, half an ounce of isinglass, and whip it to a strong froth; put it in the mould all day, and add sweetmeats or French prunes in the middle.

RICE Rice, 3 ozs.; milk, $\frac{1}{2}$ pint; cream, $\frac{1}{2}$ pint; isinglass, $\frac{1}{2}$ oz.

RICE CUSTARD.—Boil three pints of new milk with a blade of cinnamon, lemon-peel, and sugar. Mix the yolks of two eggs, well beaten with a tablespoonful of rice flour, and a cupful of cold milk. Take a basinful of the boiling milk, mix it with the cold which has the rice in it, and add it to the remainder of the boiling milk, stirring it one way till it begins to thicken. Pour it into a pan, stir it till it is cool, and add a tablespoonful of brandy. This is a good imitation of cream custard, and considerably cheaper.

RICE MILK. 3 pints; cinnamon, 1 blade; lemon-peel and sugar, to flavour; eggs, 2 yolks; rice-flour, 1 tablespoonful; milk, 1 cupful, cold; brandy, 1 tablespoonful.

RICE DUMPLINGS.—Pick and wash a pound of rice, and boil it gently in two quarts of water till it becomes dry, keeping it well covered and not stirring it. Then take it off the fire and spread it out to cool on an inverted sieve, loosening the grains lightly with a fork, that all the moisture may evaporate. Pare some apples and scoop out the cores, then fill up the cavity with marmalade or with lemon and sugar. Cover every apple all over with a thick coating of the boiled rice. Tie up each in a separate cloth, and put them into a pot of cold water. They will require about an hour and a quarter after they begin to boil, perhaps longer.

RICE FLOUR.—Take any quantity of whole rice, wash it thoroughly, changing the water several times; drain and press it in a cloth, then spread it on a dish, and dry it perfectly; beat it in a mortar to a smooth

powder, and sift it through a fine sieve. When used to thicken soup or sauces, mix it with a small quantity of cold water or of broth, and pour it to them while they are boiling. This flour when newly made is of much purer flavour than any usually prepared for sale.

RICE FLOUR CEMENT.—An excellent cement may be made from rice flour as follows:—Mix the rice flour intimately with cold water, and gently simmer it over the fire, when it will readily form a delicate and durable cement, not only answering all the purposes of common paste, but admirably adapted for joining together paper, cards, &c., in forming the various beautiful and tasteful ornaments which afford much employment and amusement to the ladies. When made of the consistence of plaster clay, models, busts, bas-reliefs, &c., may be formed of it, and the articles, when dry, are susceptible of high polish and very durable.

RICE PLUMMERY.—Mix two tablespoonsfuls of rice flour with a little cold milk, and add to it a pint of boiled milk sweetened and seasoned with cinnamon and lemon-peel. Two bitter almonds pounded will heighten the flavour. Boil this, stirring it constantly, and when of proper consistence, pour it into a mould or basin. When cold turn it out, and serve with cream or a thin custard round it, or with a sauce of wine, sugar, and lemon-juice.

RICE FRITTERS.—Boil four ounces of rice in a quart of cream or very rich milk till it is of the consistence of pap. Stir in a quarter of a pound of sugar. When cold, mix intimately together four tablespoonsfuls of flour, a little salt, and eight eggs well beaten. If not stiff enough, add more flour and sugar, and fry the batter as fritters. Serve with a little melted butter, wine, and sugar poured hot into the dish.

RICE Rice, $\frac{1}{2}$ lb.; cream or milk, 1 quart; sugar, $\frac{1}{2}$ lb.; flour, four tablespoonsfuls; salt, sufficient; eggs, 8.

RICE GRUEL.—Wash and boil a quarter of a pound of rice in a quart of water for three or four hours. Strain the gruel away from the rice, and put it in a cool place. When wanted for use, take half a panikin of it, and warm it with an equal quantity of milk. Add a little sugar. This is very useful in cases of relaxed bowels.

RICE JELLY.—Boil half a pound of rice, and a small piece of cinnamon, in two quarts of water for one hour; pass it through a sieve, and when cold it will be a firm jelly; which, when warmed in milk and sweetened, will be very nutritive; add a pint of milk to the rice, in the sieve, boil it for a short time, stirring it constantly, strain it, and it will resemble thick milk if eaten warm.

RICE MILK. Rice, $\frac{1}{2}$ lb.; cinnamon, small piece; water, 2 quarts; milk, 1 pint.

RICE MILK.—Wash the rice, and pick out the black parts. If milk be plentiful, it may be boiled in milk, if not, boil it in water to plump and soften it, and when the water is wasted put it in the milk; take care that the rice in thickening does not adhere to the saucepan. Season with sugar and a bit of cinnamon boiled in milk.

RICE PANCAKES.—Boil half a pound of ground rice to a jelly in a pint of water or milk, and keep it well stirred from the bottom to prevent it being burnt; if too thick add a little more milk, take it off the fire; stir in six ounces of butter, a pint of cream, six eggs well beaten, a little salt, sugar, and nutmeg, with as much flour as will make the batter thick enough. Fry with lard or dripping.

RICE ROLL.—Rice, $\frac{1}{2}$ pound; milk or water, 1 pint; butter, 6ozs.; cream, 1 pint; eggs, 6; flour, sufficient.

RICE PASTE.—Boil a quarter of a pound of ground rice in a very small quantity of water; strain from it all the moisture as well as you can; pound it in a mortar with half an ounce of butter, and one egg well beaten, and it will make an excellent paste for tarts, &c.

RICE ROLL.—Rice, $\frac{1}{2}$ lb.; water, sufficient; butter, $\frac{1}{2}$ oz.; egg, 1.

RICE PORRIDGE.—On half a pound of rice pour three quarts of boiling water; let it swell till it becomes quite a jelly; add half a pound of oatmeal, previously mixed with cold water, stir it well together, add an ounce of onions finely chopped, half an ounce of bacon-fat, butter, or lard, salt and pepper to taste. Boil the whole together, stirring all the time.

RICE ROLL.—Rice, $\frac{1}{2}$ lb.; wafer, 3 quarts; oatmeal, $\frac{1}{2}$ lb.; onions, 1 oz.; bacon-fat, lard, or butter, $\frac{1}{2}$ oz.; salt and pepper to season.

RICE PUDDING.—This favourite dish may be prepared in a variety of ways, of which the following are some of the most approved:—1. Throw six ounces of rice into plenty of cold water, and boil it gently from eight to ten minutes; drain it well in a sieve or strainer, and put it into a saucepan with a quart of milk; let it stew until tender, sweeten it with three ounces of sugar, stir to it gradually three eggs, beaten and strained; add grated nutmeg, lemon-rind, or cinnamon, and bake it for an hour in a gentle oven. 2. Boil a quarter of a pound of rice in a quart of milk, with a stick of cinnamon till it is thick; stir it often, to prevent burning; pour it into a pan, mix in a quarter of a pound of butter, and half a nutmeg grated; add sugar to taste, and two tablespoonfuls of rose-water; stir all together till cold; beat up the yolks of eight eggs, and the whites of four, incorporate all thoroughly together, lay a thin puff-paste at the bottom of the dish, and nip the edge; then pour in the pudding and bake it.

3. Take a quarter of a pound of rice, well picked and washed, tie it in a cloth leaving room for it to swell; boil it for an hour; take it up and stir in a quarter of a pound of butter, some nutmeg and sugar, tie it up again very tight and boil it for another hour. Serve with milk, butter, and sugar, over it.

4. Wash very clean a quarter of a pound of whole rice, pour on it a pint and a half of new milk, and stew it slowly till quite tender; before it is taken from the fire, stir in two ounces of good butter, and three of sugar; and when it has cooled a little, add four well-whisked eggs, and the grated rind of half a lemon. Bake the pudding in a

gentle oven from thirty to forty minutes. As rice requires long boiling to render it soft in milk, it may be partially stewed in water, the quantity of milk diminished to a pint, and a little thick sweet cream mixed with it, before the other ingredients are added. 5. Mix very smoothly five ounces of ground rice, with half a pint of milk, and pour it into a pint and a half more which is boiling fast; keep it stirred constantly over a gentle fire from ten to twelve minutes, and be particularly careful not to let it burn to the pan; add to it before it is taken from the fire, a quarter of a pound of butter, six ounces of sugar and a few grains of salt; turn it into a pan, and stir it for a few minutes, to prevent its hardening at the top; then mix with it by degrees but quickly, the yolks of eight eggs and the whites of two, the grated rind of a lemon and a glass of brandy. Lay a border of rich paste round a buttered dish, pour in the pudding, strain a little clarified butter over the top, moisten the paste with a brush, or small bunch of feathers dipped in cold water, and sift sugar over it. Bake it in a very moderate oven for three-quarters of an hour. 6. Scald the rice in a small quantity of water; when all the water is absorbed by the rice, add a quart of new milk, and let it boil up, with a stick of cinnamon; beat three eggs with fine moist sugar, stir to them gradually the boiling milk and rice; add an ounce of beef suet or butter; when it is in the pan, or dish, which should be buttered before putting in, grate nutmeg over the top; put it in the oven as soon as made, and bake for an hour.

RICE ROLL.—1. Rice, 6ozs.; water, sufficient; milk, 1 quart; sugar, 3ozs.; eggs, 3; nutmeg, cinnamon, or lemon-rind, to flavour. 2. Rice, $\frac{1}{2}$ lb.; milk, 1 quart; cinnamon, 1 stick; butter, $\frac{1}{2}$ lb.; nutmeg, $\frac{1}{2}$ of 1; sugar, to sweeten; rose-water, 2 tablespoonfuls; eggs, 8 yolks, 4 whites. 3. Rice, $\frac{1}{2}$ lb.; butter, $\frac{1}{2}$ lb.; nutmeg, to flavour; sugar, to sweeten. 4. Rice, $\frac{1}{2}$ lb.; milk, $1\frac{1}{2}$ pint; butter, 2ozs.; sugar, 3ozs.; eggs, 4; lemon-rind, $\frac{1}{2}$ of 1. 5. Rice, 5ozs.; milk, $\frac{1}{2}$ pint, and $1\frac{1}{2}$ pint; butter, $\frac{1}{2}$ lb.; sugar, 6ozs.; salt, few grains; eggs, 8 yolks, 2 whites; lemon-rind, 1; brandy, 1 wineglassful. 6. Rice, sufficient; milk, 1 quart; cinnamon, 1 stick; eggs, 3; sugar, to sweeten; suet or butter, 1oz.

RICE RAGOUT.—Take some well picked rice, wash it well, and boil it five minutes in water; strain it, and put it into a stewpan with a bit of butter, a good slice of ham, and an onion. Stew it over a very gentle fire till tender, have ready a mould lined with very thin slices of bacon, mix the yolks of two or three eggs with the rice, and then line the bacon with it about half an inch thick. Put it into a ragout of chicken, rabbit, veal, or of anything else; fill up the mould, and cover it close with rice; bake it in a quick oven an hour, turn it over, and send it to table in a good gravy or curry sauce.

RICE SAUCE.—Steep a quarter of a pound of rice in a pint of milk, with onion, pepper, &c., as in the last receipt; when the rice is quite tender (take out the spice), rub

it through a sieve into a clean stewpan; if too thick, put a little milk or cream to it. This is a very delicate white sauce, and, at elegant tables, is frequently served instead of bread sauce.

RICE SNOW-BALLS.—Wash and pick half a pound of rice very clean, put it on in a saucepan with plenty of water; when it boils ten minutes, drain it on a sieve till it is quite dry, and then pare six apples, weighing two ounces and a half each. Divide the rice into six parcels, in separate cloths, put one apple in each, tie it loose, and boil it one hour; serve it with sugar and butter, or wine sauce.

RICE SOUFFLÉ.—Boil two ounces of rice in milk, add the yolks of two eggs, a little sugar, and some candied orange-peel; then boil it again, and make a wall with it around the edge of the dish. Have ready some apples pared, and the cores scooped out; stew these apples in a little lemon-juice and sugar, filling the apertures with candied sweetmeats. Fill the shape with the apples, and cover them with the whites of eggs, beaten to a froth, with white sifted sugar. Harden it in a cool oven.

RICE SOUP.—This soup is served well thickened with the rice, which is stewed in it for upwards of an hour and a half, and makes thus, even with the common bouillon of the country, an excellent winter potage. Wipe, in a dry cloth, eight ounces of the best rice; add it, in small portions, to four quarts of hot soup, of which the boiling should not be checked as it is thrown in. When a clear soup is wanted, wash the rice, give it five minutes' boil in water, drain it well, throw it into as much boiling stock or well-flavoured broth as will keep it covered till done, and simmer it very softly until the grains are tender, but still separate; drain it, drop it into the soup, and let it remain in it a few minutes before it is served, but without simmering. When stewed in the stock, it may be put at once, after being drained, into the tureen, and the clear consomme may be poured to it. An easy English mode of making rice soup is this:—Put the rice into plenty of cold water; when it boils throw in a small quantity of salt, let it simmer for ten minutes, drain it well, throw it into the boiling soup, and simmer it gently from ten to fifteen minutes longer. An extra quantity of stock must be allowed for the reduction of this soup, which is always considerable.

RICE THICKENING, except for white soup, to which arrow-root is more appropriate, the most preferable to all other ingredients generally used for this purpose the finest and freshest rice-flour, which, after being passed through a lawn sieve, should be thoroughly blended with the salt, pounded spices, catou, or wine, required to finish the flavouring of the soup. Sufficient liquid should be added to it, very gradually, to render it of the consistence of batter; and it should also be perfectly smooth: to keep it so, it should be moistened sparingly at first, and beaten with the back of a spoon until every lump has disappeared. The soup should boil quickly when the

thickening is stirred into it, and be simmers for ten minutes afterwards. From an ounce and a half to two ounces of rice-flour will thicken sufficiently a quart of soup.

RICE WATER is used in diarrhoea as the only drink which will not increase the mischief. It is made by boiling a spoonful of washed Carlsline rice in a pint of water for two or three hours, reducing this with more water until it is thin enough to suit the palate. A little lemon-peel may be added towards the last to give a flavour, and it should be sweetened to the taste. It makes a very pleasant drink. Nutmeg is liked by some people, and cloves or cinnamon by others, as an additional flavour.

RICKETS.—A disease almost invariably found in children, and is a peculiar condition of the system, attacking infants between the eighth month and their second year, and exhibiting itself by a remarkable softening of the bones, especially those supporting the frame, or exposed to weight and pressure, by which, according to the action of the muscles, the bones become warped, bent, or even twisted, till the body assumes a crippled and deformed appearance. Whatever may be the immediate cause of this unnatural condition, whether it is, as is generally supposed, the consequence of scrofula, or some other latent and specific evil in the blood, science has not yet discovered; and all that is actually known is, that at and during the period of *teething*, the child begins to lose its health and colour, and the bones, which should every day, if in a state of health, become harder by the addition to their structure of the bony principle—the phosphate of lime—become softer, and what lime they already had in their texture is gradually absorbed till what was, and should have developed into bone, becomes little more than gristle, which, under the weight of the body and action of the muscles, is bent and deformed in the most extraordinary fashion. This condition usually begins in the spine, extends to the hips, and downwards to the thighs and legs; the upper extremities suffering in a like manner, though not to so great an extent, either at the same time or afterwards.

The treatment of rickets has been a subject of great controversy, some practitioners believing that, as the whole evil resulted from the loss of phosphate of lime in the bones, any treatment that gave back to the body this salt, must ensure a recovery; but though absent from the bones, we have no proof that the phosphate of lime is deficient in the system, though the proper organs do not deposit it in the bony cells. Such theories, then, however feasible, have long been exploded, and the best treatment now adopted is to keep the child *as much on its back as possible*, and neither allow it to stand or sit up, but by a steady course of tonics, good and nutritious food, pure country air, frequent cold water, or cold sea-bathing, with a steady friction of the back, sides, and limbs, with the hand, wait patiently till the powers of the system are so far

recovered from their diseased state as to commence a reaction, and Nature, as she will do when judiciously aided, herself effects a perfect cure. To enable the system to recover itself, straighten the curved limbs, and restore the little patient to health and symmetry. All bandages, restraint, compression, and mechanical means, once so much in use for rickets, must be thrown aside; a course of quinine, varied with an occasional use of steel wine, regularly adopted and given three times a-day, with an aperient powder once a-week, a removal, if possible, into the country, and the daily use of a cold bath, and friction of the body with the hand; these will be found a better means of straightening the bones than any mechanical appliance whatever. By such a course as this, continued for a few months, the worst cases of rickets may be effectually treated and permanently cured. The following preparations will be found the most useful medicines for the attainment of the several objects. *Tonic mixture.* Take of—

Quinine 12 grains.
Infusion of red roses . . 5½ ounces.

Sulphuric acid 5 drops.

Dissolve, and add syrup of poppies, half an ounce; mix, and give from half to a full teaspoonful, according to age, three times a-day. *Steel mixture.* Take of—

Steel wine 2 ounces.
Syrup of saffron 3 drachms.

Water 1½ ounces.

Mix, and give in the same quantity and at the same time as the other. *Aperient powder.* Take of—

Grey powder 18 grains.
Sulphuret of antimony . . 12 grains.
Scammony 18 grains.
Jalap 12 grains.

Mix, and divide into 6 powders; half or a whole powder, according to the age of the child, once or twice a week.

RIDGING OUT.—In gardening, a mode of finishing the surface, applicable either to dug or trenched grounds. By this means the soil becomes more thoroughly exposed to the atmosphere and heat, which is highly promotive of vegetation. The most effectual mode of ridging may be described by the aid of the annexed figure:—*a, b, c, d,* represent a section of the ground to be

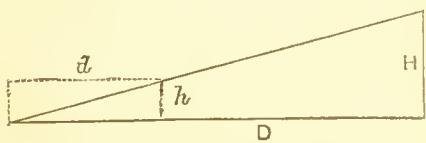


trenched two feet deep. In the first place, the ground is measured out in longitudinal beds four feet wide; this done, the top spit of the bed *c* is laid on the bed *g*, and the second spit of the bed *c* is laid on *h*. The first or top spit of the bed *f* is then laid on *h*, so that the top soil and subsoil are kept on separate and alternate beds, and may be mixed, reversed, or returned as taken out, at the will of the operator. By this method the advantages are, much greater exposure of the surface to the action of the weather; the opportunity of

incorporating with the soil any desirable or obtainable manures, and at any desired depth; a thorough blending of the soil to the depth of two or three feet; and it also facilitates the operation of draining where necessary. When the first thrown-out beds are sufficiently pulverized, they are levelled down, and others thrown out in the same manner; *g, h, i* represent the ridges thrown out, and left as rough as possible.

RIFLE PRACTICE.—The formation of rifle corps in England is at the present moment one of the most important and generally approved movements which has ever been organized in this nation. In every part of the kingdom, and amongst all grades of society, rifle corps are being formed, which promise in the aggregate to become a sufficient defence to guard our native shores. Nor does the benefit derivable stop here; there cannot be a doubt but that every rifle volunteer will find personal advantage in the practice of the rifle, and the drill which accompanies it. It will tend to develop his frame, to inure his system, to give him a better carriage, and more elasticity of movement, and, in a word, to impart to him that healthy tone, both morally and physically, which ever attends active and manly exercises. The terms and conditions of entering the different rifle corps vary according to the locality, the social position of the volunteers, and other circumstances; all these particulars may be learned with very little difficulty by applying at the proper quarters; and, generally speaking, the volunteer will find that he can enrol himself at very little personal interruption to his ordinary pursuits, and at a trifling expense. Supposing that the volunteer is now enrolled, and has a rifle placed in his hands, it becomes essential to lay down some general rules for his guidance, which greatly simplify and facilitate his practice. With this end in view the chief objects are—1. That each individual should have sufficient knowledge of every part of his rifle to enable him to take it to pieces, and put it together again when requisite. 2. That he should know how to load it properly. 3. How to regulate his aim according to the distance of the object to be hit. 4. Be practised in estimating distances within the ordinary range of his rifle. 5. Be ready on all occasions to take up a position in which he will be enabled to aim with facility. To keep his body steady without constraint; to be careful, above all, not to allow his sights to incline on one side or the other; to support the recoil. 6. When pulling, or rather “pinching” the trigger in the act of firing, to be particularly careful not to derange his aim. These few simple rules comprise nearly all that is really necessary to enable any man to attain the maximum effect with his rifle. The operations with the rifle when placed in the hands of beginners are conducted by what is termed the target drill. For this exercise the traversing rest is used to support the firelock; or else three sticks tied together near the top, and supporting a bag of sand about four feet and a half from the ground,

answer the same purpose. A squad never exceeds ten men at a time at each rest; it is formed in a single rank, each man having his own firelock. The instructor first explains the principles of aligning the sights on an object, confining the attention of the squad to the following rules. 1. That the sights do not incline either to the right or left. 2. That the line of sight is taken along the centre of the notch of the back sight and the top of the fore-sight, which is made to cover the centre of the target. 3. That the eye is fixed steadily on the mark, and not on the barrel or fore-sight, which latter will be easily brought into the alignment if the eye be fixed as directed. Particular attention is directed to this rule, for beginners are apt to fix the eye on the fore-sight instead of the mark, in which case the latter can never be distinctly seen, and the difficulty of aiming is greatly increased. 4. That in aiming, the left eye be closed. It is evident that to make use of sight in the field it is absolutely necessary that soldiers should be exercised at calculating distances by the eye. If a person look at one and the same object at different distances, the distances are in an inverse ratio to the several "apparent heights" of this object. In order to understand clearly what is meant by apparent height, it should be remarked that, when a person looks at a distant object, of whatsoever dimensions it may be, this object can always be concealed as to its whole height by a straight line placed at a short distance from the eye; the length of the line, concealing completely the height of the object, is merely the apparent height of the object. To calculate these apparent heights, therefore, it is sufficient to consider that the two visual rays, which are directed from the eye to the upper and lower extremities of the object looked at, form with the real height of that object two similar triangles, of which the sides are proportionate one to the other. In the



accompanying engraving D represents the distance from the eye to the object, d the distance from the eye to the point where the apparent height is taken, H the real height, and h the apparent height. If for H and D we take known quantities, then to calculate the several values of h , ascending to the distances, it will suffice to divide successively the produce $H \times d$ by the different values of D . In practice, d is taken equal to the length of an outstretched arm; and H is taken equal to six feet or eight feet, which are the height of an infantry or cavalry soldier (mounted) respectively. The calculations necessary to find the ranges are also most simple: for if the apparent height, h , be ten times, one hundred times, two hundred times smaller than the real height,

the distance D will be ten times, one hundred times, smaller than the real distance, D . In connection with this important point of rifle-practice, the instructor makes it his business to explain the differences of sight as immediately applying to the rifle. He points out the difference between *fine sight* and *full sight* in aiming: the former being when the line of sight is taken along the bottom of the notch of the back-sight, the fine point of the fore-sight being only seen in the alignment as a : the latter is when the point of the fore-sight is taken in alignment with the shoulder of the notch of the back-sight, as b . As these two methods of aiming, cause a slight difference in the angle of elevation, it is necessary the soldier should understand that the ordinary rules for aiming are intended to apply to *half-sight*, which means that the alignment is taken with the summit of the fore-sight at half-distance between the shoulder and bottom of back-sight, as c . As some firelocks carry higher, and others lower than the average, allowance can be made for this defect by aiming with full sight when the musket is found to carry low, and by aiming with fine sight when it carries high: when, however, no such defect is observed in the practice with the firelock, the learner is invariably taught to aim at half-sight.

Having explained the foregoing rules, the instructor causes each pupil to take aim at an object of the same size as the bull's-eye used in practice, at every distance of fifty yards from one hundred to nine hundred yards. After each man has aimed, he steps aside that the instructor may see if the aim has been correctly taken; should he perceive any error, he causes the next man to advance and point out the defect; the error, however, is always corrected by the person who has aimed. To vary the practice, the squad is occasionally exercised at intermediate distances, and is also made to aim at a soldier placed in front of the target, or at a group of men. The *position drill* differs from the platoon exercise; the latter comprehending the positions of loading and firing in the ranks, in which the riflemen are instructed by the serjeant, whereas, in the position drill the attention of the instructor of musketry is confined exclusively to the essentials of good independent firing. For this drill the squad parades in marching order, and is formed in single rank at one pace apart, and is placed at a convenient distance from the target: the instructor then orders the squad to fix bayonets and proceed with the position drill, first in slow time standing, according to the instructions hereafter detailed; and, as it is considered that too much pains cannot be taken to

ensure that each man takes a deliberate aim at some specified object whenever he brings his firelock to the "present," if no natural object presents itself for the riflemen to aim at, several small bull's-eyes are marked on the barrack wall. 1. *Load.* According to regulation. 2. *Ready.* Adjust the sight, and proceed according to regulation. 3. *Present.* At this word the firelock is brought at once to the shoulder, the centre part of the heel-plate being pressed firmly into the hollow of it with the left hand, which grasps the piece at the "swell," the right hand holding it at the "small," the right elbow raised (but, when firing in platoon, not so much as to impede the aim of the rear-rank man), the muzzle inclining to the bottom of the object, and the forefinger of the right hand extended along the side of the trigger-guard, the left eye being at the same time shut. "Two." The recruit now raises the muzzle steadily until the foresight is aligned through the backsight with the object on which the right eye is fixed, the second joint on the fore-finger being on the trigger, and the breathing restrained. "Three." The trigger is "pinched" rather than pulled with the second joint of the fore-finger, by a steady pressure, without the slightest motion of hand or elbow, the eye being kept still fixed on the object, as in the preceding motion. "Four." The rifle is brought down to the capping position and the flap shut down, at the same time the right foot is brought to the position in which it was placed before coming to the "ready;" a pause of slow time is counted, and the recruit comes to the position of "prepare to load." 4. *Load.* According to regulation. The whole squad having thus been put through the drill in slow time, and the position of each man corrected, the instructor gives orders to continue the motions of loading and firing independently, each man aiming at a specified mark. The most minute attention is now given to each man's position when at the "present," and more especially that the firelock is pressed firmly to the shoulder with the left arm, and that the trigger is pulled without the slightest jerk, and with the motion of the fore-finger only, the eye being fixed upon the mark during and after snapping the lock. In this drill the instructor frequently places himself in front of the squad at five or six paces distant, and causes each man successively to aim at his right eye, in order to ascertain that he obtains the alignment quickly and correctly, and that his aim is not disarranged by pulling the trigger; this is of the utmost importance. When the men have been sufficiently exercised in the position of firing standing, they are put through the drill in the kneeling position with unfixed bayonets, going through it at first at slow time, according to regulation, observing the several points to which the attention is called in the foregoing remarks. *Judging distance* drill is an important branch of rifle-practice, for, in order to apply the rules of firing laid down for the rifle, it is necessary to know the distance which separates a man

from the object he is firing at. In firing for instruction, the target is generally placed at known and measured distances; but before the enemy, the distance being unknown, it is necessary to judge the distance quickly and exactly, in order to regulate the elevation of the piece accordingly. In order to teach the riflemen to estimate distances by the eye, he is instructed according to the following rules in the first instance:—The instructor causes a line of three hundred yards to be measured accordingly; this line is divided into equal parts of fifty yards each by perpendicular lines. At the extremity of each of these perpendicular lines is a soldier standing at ease, and facing the squad he is about to instruct. It will be observed that each of these soldiers is placed at a greater distance from the line of three hundred yards, in proportion as he is distant from the point where the squad commences its instruction, in order that each soldier may serve in turn as a point of distance for the squad to make observations on. The instructor points out successively to the men the different parts of the figure, arms, accoutrements and dress, which they can still perceive distinctly on the soldier placed at fifty yards distance, and also those parts which they can no longer clearly distinguish at this distance: the men are then questioned one after the other respecting the observations they make on what they see. Eyesight is not the same in all. Every rifleman is directed to impress upon his mind the appearance of the man placed at fifty yards. The instructor, then, by moving the squad to the right, places it in front of the soldier at one hundred yards distance, and causes each rifleman to make observations of the same kind as on the man at fifty yards, desiring him also to make comparisons between the two men placed at these two distances. The instructor then passes on to the other distances, proceeding in the same manner as for the first two. He endeavours, above all, to point out to each recruit, according to the observations he may make, the differences that exist between the men placed at the six different distances comprised in the subdivisions of three hundred yards, pointing out at each distance what parts of the figure, dress, and equipment are clearly perceptible, those that are seen confusedly, and those that are no longer visible. The instructor next causes the men to take notice of the position of the sun and state of the atmosphere and background while making these observations, that they may be accustomed to alterations in the appearance of the several objects. The men placed as points are from time to time relieved; for which purpose the squad usually consists of double the number of men employed as points. When all the men of the squad have made a sufficient number of observations on the different points designated, and when these observations are well fixed on their minds, the instructor proceeds in the following manner to the estimation of distances comprised within the limits of three hundred yards. After having marched the squad on

to different ground from that on which the appreciation of distances has taken place, the instructor forms them into single rank, and sends a man to the front, marching him by means of the bugle diagonally to the right and left, and occasionally at the double, in order that the rest of the squad may not count his paces; then, at any current distance within three hundred yards, he will command "Halt;" when the man faces the squad and stands at ease. He then orders the men to observe the soldier facing them, and to estimate the distance, recollecting the observations previously made on the men placed at measured distances. The instructor then calls each man separately to the point and questions him, noting down his answer, which must be given in a low tone of voice, in order that those following him may not be influenced by his opinion. Every man adjusts the sight of his firelock to the distance he judged. When the men have all given their answers, the squad proceeds to measure the correct distance by advancing towards the man judged from, the instructor placing himself in the centre, the men counting the number of paces, the instructor only counting them aloud. The men are taught to measure the distance in the following manner: at every 120 paces they double up one finger of the right hand to make 100 yards, commencing again 1, 2, 3, and so on. When at the end of any division of 100 yards the remaining distance appears to be within 100 yards, they commence counting by tens of yards, by doubling up a finger at every twelve paces. The correct distance is, however, afterwards ascertained by actual measurement. The men having been drilled up to 300 yards, continue the exercise up to 600 yards; first at fixed points at every fifty yards from 350 to 600 yards, and subsequently at unknown distances. In exercising the men at great distances, the squad is usually separated into two equal parts, facing each other. After every man has judged the distance which separates them, they advance towards one another, each party measuring half the distance; by this means much time and walking are saved. *Judging distance practice* is another essential department in rifle exercise, and should, when practicable, be carried on by the sections not occupied in firing, when at target practice. A cord of the length required for the practice (divided into parts of five yards each, with the distances of each division from the end so marked as to be distinguished only on close inspection) is stretched in any convenient direction, care being taken to vary the point as much as possible for the several practices. One or more men, when judging at 300 yards only, but beyond that distance a section of not less than eight or ten file, are stationed at the end or any other point of the cord that may be directed, to serve as objects to estimate from. The answers of each man are recorded in a register. The strictest silence is observed throughout the practice, the men are prevented from consulting together in judging their distance, and in

giving their answers they are required to speak in a low tone, so that they may not influence in any way the judgment of each other. The commander fixes on a point at any uncertain distance to commence the practice, to which he marches the section or party, halting at about ten paces either to the right or the left, and facing the objects; he then arranges the non-commissioned officers who are to keep the register, three paces to the front of their several sections, to prevent if possible the answers, when given, being heard by those in rear; these non-commissioned officers then call in succession upon each man of their section, who is required to judge the distance in yards, and give his answer, which is then immediately noted down in the register. When all the answers of each section or party have been noted down, they are read over to the men, and any error is at once corrected; after which the commander refers to the cord, and states aloud to the men the correct distance, which is at once noted at the top of the column, the number opposite obtained by each individual being at the same time registered and made known. At the conclusion of each practice the number of points obtained by each man is read over to the men, and the register, when completed, is signed by the non-commissioned officers; and this register is afterwards transcribed into the company's judging distance practice return. The practice of judging distance, like the target practice, is divided into three periods, each period consisting of four practices. Every man commences the course of practice in the third class, and is exercised therein at sixteen different distances in four practices. At the conclusion of these practices the register is made up. All those men who obtain sixteen points pass into the second class, the remainder recommence the practice of the third class. Each company is now told off into two classes and into sections, and the practices continue in that order, each class being exercised at sixteen different distances in four practices. At the conclusion of the practice in the second period, the register is made up as before. All those men who in the practice of the second class obtain sixteen points, pass into the first class, the remainder repeat the practice of the second class. The test for passing from the third to the second class is the same as in the practice of the first period. The company is now told off into three classes, and into sections as before, and each class exercised at sixteen different distances in four practices. The second class is composed partly of men who repeat the practice of the second class, and partly of those who have passed out of the third class in the second period. At the conclusion of the practice in the third period, the columns of this period in the company's judging distance practice return, are added up and signed as directed for the first and second periods. A final classification is then made, and the man who, in the practice of the first class, obtains the greatest number of points, receives the prize as the best judge of distance.

The following remarks apply to rifle-practice when left entirely to the independent judgment and undirected effort of the rifleman:—One of the first lessons should consist of the following practice at a target about eighteen inches in diameter, and at a distance of ten or twelve paces. Having put a small copper thimble, or percussion-cap, from which the composition has been removed, upon the nipple, the pupil should raise the rifle (previously cocked) steadily to his shoulder, and, while closing his left eye, look intently with the right along the first sight to the more distant one, the gaze being steadily fixed upon the mark, however, and not on the sight, and the muzzle being raised above the bull's-eye. The rifle should now be steadily lowered, and at the instant that the more distant sight covers the centre of the bull's-eye the motion should be arrested, the centre of the heel-plate, as above directed, firmly pressed against the muscle of the shoulder, and the trigger simultaneously pulled. All delay is bad when once the aim has been clearly got. After the cock has fallen on the nipple, the eye should still look, for the space of a second at least, as fixedly as before upon the target, noting carefully the deflection upon each occasion. Easy as this may appear, it will be found that to do it without flinching requires some considerable practice. When that amount of proficiency is obtained, the same process should be repeated with caps, proceeding gradually to the use of a few grains of gunpowder, increasing the charge to two or three drachms. When the slightest terror is no longer felt at the critical moment of the explosion, a bullet, with a very small charge of powder may be ventured on. By degrees the shooter will find himself acquiring confidence, and having repeatedly struck the target at a dozen yards with half a drachm of powder, he will find the same feat practicable enough at twenty, fifty, and finally at a hundred yards, with one drachm, or one drachm and a half. Having proceeded so far, he will do well to continue working daily at the latter range for some weeks, until he can make certain of raising his rifle to the "present," and of striking the bull's-eye almost at the same moment. He may then progressively extend his distance by twenty or twenty-five yards at a time, till he has reached the extremest limits at which good shooting can be calculated upon. He may consider himself somewhat above an average shot, when at fifty yards he can make sure of obtaining twenty hits all within a circle of five inches in diameter; at a hundred yards within a circle of ten inches; at two hundred yards within a circle of twenty inches; and so on up to a thousand yards. As to that range, if the shooter can be certain of putting ten bullets in succession within eight feet in diameter, he will do as much as any one need hope to achieve. There are many apparently trifling and non-essential points to attend to in rifle-shooting which a tyro is little apt to heed, among which are the following:—A very important matter to be kept in

mind while practising at the target is the charge of powder. It cannot be too strongly inculcated that, after careful trial, the proper charge for a particular rifle having been once determined upon, that charge ought never to be increased or diminished even by a grain. When the greatest possible accuracy is required in shooting, it is well worth while to weigh each charge in a delicate balance, and subsequently to enclose it in a small dry glass or metal tube, carefully securing it with a cork or stopper. If this process be deemed too tedious, a small brass charger should be used, slightly "hooped," each time that it is filled; it should then be tapped lightly at the bottom, so as to shake off the superfluous grains, leaving the measure exactly filled. Care should be taken that no extraneous matters get mixed up with the powder, as every particle of the kind, however small, will diminish more or less the momentum of the bullet, causing it to strike low, for besides displacing a certain bulk of powder, any matter of the kind prevents the due and regular ignition of the charge. It has frequently been remarked that, when using a loose charge, the best shooting was at the commencement of the practice, when the flask was full. This arises from the common habit of filling a flask when about three parts empty; the dust, smaller grains, &c., thus collect at the bottom, and the force of each later discharge is proportionably feebler. To avoid this, the stock of powder should be occasionally sifted through a lawn or silk sieve. American riflemen attach much importance, at shooting-matches, to wiping out the barrel after every discharge. For this purpose the shooter is provided with a number of pieces of rag (the material preferred being cotton flannel), each about two inches square; one of these being twisted round a rod kept for the purpose, is passed up and down the barrel after each shot, care being taken never to use the same rag twice until it has been thoroughly washed. In England so much nicety is not considered essential even in match-shooting; but there can be little doubt that the occasional removal of the products of combustion is very desirable.—Books: *The Rifle and How to Use it*, by Hans Busk, 2s. 6d.; *Rifle Volunteers*, 1s.; *Jervis's Rifle Musket*, 2s.

RINGWORM.—A disease of the skin which is generally confined to the scalp of the head, but sometimes appears on, or extends to, the forehead, the neck, the arms, the hands, and other parts of the body. The first symptoms of ringworm are, small red pimples breaking out in a circular form, and containing an acrid fluid. At the same time, if the seat of the disease be the scalp, the hair breaks and falls off, leaving a bald circular patch; this from being of an insconsiderable size at first, spreads until it sometimes becomes as large as the palm of the hand. Great itching accompanies the disorder, and the patch will be found scurfy, slightly red, with the irregularly broken hairs protruding. If the disease be unchecked by treatment, it goes on extending,

until at the last it involves almost the entire scalp. The hair which is not detached on the affected part, becomes lighter in colour and woolly in texture. If pustules form, the discharge from them dries in the form of scurfy scabs or in crusts. The treatment of ringworm consists in shaving the part and keeping it clean with soap and water. The applications first employed should be of a soothing nature, and stimulants had recourse to gradually. Numerous remedies are resorted in the case of ringworm with varying success; the following are deemed the most reliable. When the disease is not of long standing, use the following lotion:—

Take of

Sulphate of zinc . . . $\frac{1}{2}$ a drachm to
 1 drachm.

Acetate of lead . . . 15 grains.

Distilled water . . . 6 ounces.

Mix them for a wash. With this lotion the affected parts are to be washed, and if this fails the following may be used:—

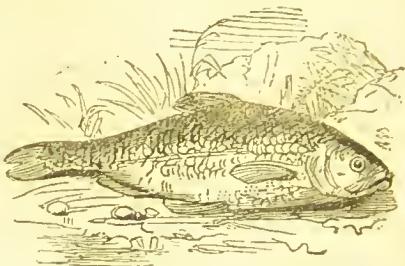
Nitrate of silver . . . 1 drachm.

Dilute nitric acid . . . $\frac{1}{2}$ ounce.

With this mixture, the diseased circles, after the scalp has been shaved, should be pencilled over, and in ten or fifteen minutes afterwards, the parts should be well sponged, first with tepid water, and then covered with pledges of lint dipped in cold water, and the evaporation diminished by covering the wet lint with oiled silk. An ointment composed of a drachm of sulphate of zinc, to an ounce of simple cerate, is also found to be of the greatest service. Care should be taken to wash the head free from the previous ointment or lotion, before a fresh application is made. During the prevalence of the disease, the head should be enveloped in a linen cap. Few diseases give more trouble and vexation in the management than ringworm, for it often resists for months the best directed treatment, and that which succeeds admirably in one case often fails to make any impression in another. The greatest care, therefore, should be exercised in this respect, and the moment the disease presents the slightest indications, active steps should be taken to repel it. Nor does the cure depend upon local applications alone. The system generally should be watched and regulated; an occasional mild saline aperient should be administered, aided by tonic medicines, such as iron, bark, and mineral acids. The diet must likewise be strictly attended to, and nutritious food, of which red meats and ripe fruits form a portion, should be rigorously adhered to. Clothing, ventilation, and exercise must in their turn be equally well cared for. It is difficult to determine what is the precise origin of the disease; but want of cleanliness and improper food, particularly an exclusively vegetable diet, are the most commonly predisposing causes. When it happens that one child in a family or a school is attacked with this disease, he should be kept apart from the rest until a cure is effected. The comb, brush, towel,

and every other article likely to come in contact with the part affected, should be scrupulously kept for his separate use, and, indeed, these articles should not be permitted to leave the room in which the patient is, until they have been thoroughly washed and cleansed. So highly contagious is this disease, that it is frequently extended to different portions of the same head by combs, brushes, &c., or by the nails, which children are apt to use freely, on account of the itching; and it sometimes occurs that a whole school will in a few days take the complaint from a single pupil.

ROACH.—A handsome fish inhabiting many of our deep still rivers, and preferring, in general, quiet waters. The roach is deep but thin, and the back elevated: the scales are large, and easily fall off. The fins are red, particularly whilst in perfection, as they may also be known to be by the smoothness of the scales, which, when out



of season, feel like the rough side of an oyster-shell; the side line bends much on the middle towards the belly, and the tail is a little forked. The best season for roach-fishing is from autumn until the following spring. In May they usually spawn; and after this they continue out of season for several weeks, hardly recovering until the latter end of July. Roach-angling affords much interest to those lovers of the sport who are shut out from the higher pursuits of fly-fishing. The rod used is a very light but long one, with a tolerably stiff top. A considerable length of rod is absolutely necessary to command a sufficient swim without exposing the angler to the sight of the fish. It must be also remembered, that although this, in common with every rod, should be elastic, it must by no means be too limber or flexible, or it will not strike the fish smartly. The action of the wrist would be lost, or communicated too slowly, when it had to be diffused through the elasticities of too pliant a rod. With regard to the line, the most expert anglers, in this particular branch of the sport, will seldom use any but one of single hair; others use the finest gut procurable, especially for the lower portion of the line. Some, again, employ a line made of two hairs twisted for the upper part, and allow two or three feet of the lower portion to be formed of one hair only, by which, should a fish break away, the hook only is lost, and not the float. The hook in roach angling should be as fine as the line; when

of single hair, it may be No. 9, 10, or 11; and in the depth of winter, when the bitings amount to little more than a nibble, this will not be too small. If a gut line be employed, the hook may be No. 8 or 9; and it is also advisable to take off the glare of the gut, and make it as little conspicuous as possible, to stain it very lightly of a pale water blue. The shooting of the line should engage as much attention as the rest, that the lead may not scare the fish. Unless there be much wind, or a strong ripple from current, &c., there should be somewhat less than a quarter of an inch of the float to appear above the water. The length of line from the float to the rod may vary according to circumstances, as from eighteen inches to two feet; but the shorter it is, the more command will the angler have over the extremely fine winter bites of the largest fish. The baits used in roach-fishing are principally gentles and pastes. In rivers, lakes, and ponds, in out-of-the-way places, although gentles are used, yet worms are chiefly depended on. As worm baits, the marsh, the brandling, the blood, and the red, are taken with eagerness by roach when they are on the feed; but the worms should be well secured to ensure success. Worms may be considered as the early spring bait. In its more advanced periods, worms alternate with caddies, with larvæ and pupæ, or lobs and grubs of all sorts. Salmon-roe is a favourite bait at this season with some anglers, who find it taken freely by roach, particularly in the still deeps of rivers. Gentles are employed for the advanced summer and autumn months, with pastes of various kinds, particularly the stale bread paste for still waters, and the new bread paste for streams and currents. When angling in a tide river for roach, it is essentially necessary to try the bait at various depths, for roach then never remain stationary, particularly from the time the tide is flowing until high water. To this period they commonly bite well, but as commonly they cease as soon as the tide turns, except there be a fresh in the river when they will oftentimes take in the ebb also. In navigable rivers, choose those days when there is a flush of water let out of the pounds and locks. In these cases, the fish lie waiting for what the disturbed state of the stream brings down. Should the current flow very strong, try for them towards the sides of the stream.

ROACH BOILED.—Scale, gut, and wash the fish; wipe them, cut them in three or four places on the sides; put into a stewpan some small beer, vinegar, and water (enough to cover the fish); add some salt, a bunch of sweet herbs, parsley, and a stick of horse-radish sliced; when it boils, put in the fish. Serve with anchovy sauce.

ROACH FRIED.—Scale and gut the roach, wash them in salt-and-water, and wipe them exceedingly dry; flour and fry them in boiling lard until they are brown and crisp; lay them in a warm dish; pour the fat out of the pan, put in a piece of butter, and when it boils, fry some sage and parsley until it is crisp, lay it on the roach, and serve with anchovy sauce.

ROADS, TO MAKE.—The first thing to be attended to in the construction of a road, is the drainage of the foundation. In country roads a ditch should be formed on each side. It should be of sufficient capacity to carry off all the water which falls on the surface. The foundation of a road may be either the natural surface of the ground, rendered dry by drainage, or it may be raised above the natural surface by embanking. And, as a rule, the road should be raised by embanking above the surface of the ground, on each side, in order that it may be dry, and may be acted on by the sun or wind. In forming embankments, the best mode is to follow by shallow layers of the materials. Each layer should be allowed to settle, which it will do to a concave surface, as seen in the annexed figure; and be pounded or rammed before



the next is added. In this way an embankment of the greatest solidity will be obtained. In the common roads of this country no further preparation is made than the mere drainage of the ground; the protective materials or road being simply laid on the natural surface without any intervening base. But unless the traffic is to be exceedingly light, such a construction is false economy. The great aim should be to extend the pressure on the surface of the road on as great an extent of the foundation as possible. This is effected by the interposition of the base of the road, formed of a layer of brushwood or faggots, of a solid mass of concrete or of a pitching of large stones, and sometimes on very soft ground, the layer of brushwood or faggots is used in combination with either of the other two. In either case, the first operation is to solidify by rolling or priming the earth foundation, and to form it to the same transverse section that the upper surface of the roadway is to have. When faggots or brushwood are used, which should only be in wet situations, the layer should be from four to six inches thick, with the joints well crossed; and it must be at such a depth as to be beyond the influence of atmospheric changes. In laying broken stones, or macadam, to form a road surface, great care is requisite; it should be spread in shovelfuls, equally, so as to form an even layer of three inches thick. When this layer is consolidated, another of the same thickness should be added in the same way, and so on till the requisite depth of covering is obtained. Moist weather should be chosen for laying on macadam, as in dry weather the stones do not bind together, but roll about, and are ground to dust. To accelerate the binding together of the stones, it is sometimes the practice to spread a thin layer of sand, gravel, or other foreign matter over the surface of the macadam. This practice, when needlessly resorted to, or badly done, or when improper materials are used, is

injurious in its effects; but when, on the contrary, it is used in cases of necessity, such as when macadam is laid on in dry weather, and when its effect is simply to cement the stones in their places till they become locked and compacted together, it is most beneficial. To produce such an effect, the blending material should be in very small quantity. The best is the grit of the macadam stones; the worst is chalk, on account of the effect which the weather has on it. Soft sand is bad also, because it lifts with the wheels, and balls the horses' feet. When the road is newly covered, particular attention must be paid to raking in the ruts, and placing large stones or other fenders, so as to oblige vehicles to pass over every portion of the surface in turn. In using gravel for the surface of a road, it is important to choose that which contains the smallest portion of brittle stones, such as flints. When taken from the pit, the gravel should be screened through a screen, with meshes of about three-quarters of an inch square. The portion which passes through is termed "hoggin," and is reserved for foot-paths; and of the remainder, the stones which exceed two inches should be broken. The gravel should not be divested of loam which adheres to it when it is dry from the pit, as this forms the cement which causes the separate stones to unite together until they are finally compacted by the traffic. But sometimes the gravel is perfectly clean, in which case recourse must be had to some other material, for the purpose of binding it, as loam, chalk, or clay. These, or any of them, should be added in sufficient quantity to cause the setting of the round stones. The loam of the road itself is the best material to be used, and next to that clay; chalk is the worst. When necessity compels the use of chalk, it should be reduced to powder, and mixed with the gravel, before the latter is spread, and not used as a top-dressing. The maintaining of a macadam road in repair can only be done by incessant attention. It will not do to wait till the road is worn into deep ruts and hollows, and then to fill up these with a few loads of macadam. The repair, so to speak, must go on continually. The road must never be allowed to wear into ruts; but as soon as a portion is observed beginning to wear, its surface should be loosened with the pick, and the stones replaced, so that the coating shall become all of an equal thickness. By this means the crust will wear down equally, and when fresh stone requires to be applied, it must be done by slightly loosening with the pick all the surface where it is required, and spreading the fresh stones in a stratum, not exceeding in thickness their own depth. For this general repair spring or autumn is the best season. It is a most judicious plan to coat irregularly a great length of road at a time. No sooner does wet weather set in at the close of the autumn than the roads, already heavy enough, are coated in half-mile lengths, irregularly from side to side, with four or five inches of new stone; and the result is that the poor animals of draught must only carry half their proper load, or

work at half speed. Fender stones have also to be laid down in such a way, that the zig-zag course taken to avoid them nearly doubles the length of way to be travelled. It is much better to coat the road from side to side with the thin layer as above described, and in short lengths from twenty to thirty yards, leaving between each length an interval of the same length uncoated. The relief given to the animal by this uncoated portion is such that he does not alter his pace, and as there is no need of fender stones, his course is straight. So soon as the coated portions have become set, the intervals between are treated in the same way. By this means the traffic is spread over the whole surface of the road, and the macadam wears down equally, and not in ruts. When a macadam road is very wet, its materials grind to powder rapidly under the traffic. There is, therefore, the greater necessity for facilitating the flow of the water from the road in wet weather, by removing all mud or filth that obstructs it. This is done by scraping either with a hand-scraper or with the machine. The hand-scraper has an iron blade about eighteen inches long and six inches deep, slightly curved at each extremity, and fixed at right angles to a long handle. The machine-scraper is much more efficient in sweeping, and less destructive to the roads. But when the mud on the road is in a pasty condition, and the road has been softened under it by long-continued rains, or has been broken up by frost, and the surface is lifted by the tyres of the carriage-wheels, the employment of the scrapers would tend to tear up the surface and destroy the road. In such a case the remedy is to add water to the mud till it is of a consistency to flow, and does not stick to the tyres of the wheels. The materials will then be fastened again in their places by the traffic, and after a short time the scraper may be employed. But a much more effectual cleanser is the scavenger's brush; and although the use of this cannot be afforded on country roads, it can be so in the neighbourhood of towns, and with great advantage. Sweeping does not injure a road so much as scraping, and it can be done when the road is too wet for the scraper to be employed. The mud swept or scraped to the sides of the road should be collected in heaps, and carted away as speedily as possible. In very dry weather, macadam is very speedily worn to dust, unless the road be regularly watered. The watering carts should be made light and mounted on springs, and should proceed at a smart pace, spreading the water in a gentle shower. For the purpose of repairing the roads, depots for broken stone should be established at intervals of about a quarter of a mile; they should be in the form of a parallelogram, walled on three sides, for the facility of moving the stones, which this form affords; and they are of ample size if they contain about thirty cubic yards of stone. In determining the width of a road, regard must be had to the amount of traffic; and in consideration of this, to make provision for one, two, or more vehicles pass-

ing, as the case may require. First, therefore, the extreme width of the largest vehicle used in the district, with its load, should be ascertained, and to this a foot should be added, and the width of the road should be some multiple of the dimension.

ROASTING. — The first requisite for roasting is to have a clear brisk fire, proportioned to the joint that is to be roasted; without this, every attempt must prove abortive. The next thing is to see that the spit is properly cleaned before it enters the meat, and the less it passes through, the better. A neck and loin of meat requires to be carefully jointed before it is put on the spit, that the carver may separate them easily and neatly. The joint should be balanced evenly on the spit, that its motion may be regular, and the fire operate equally on every part; for this purpose balancing skewers are necessary. All roasting should be done open to the air, to ventilate the meat from its own fumes, and by the radiant heat of a glowing fire; otherwise it is in fact baked and rendered less wholesome. For the same reason when a joint is dressed, it is better to keep it hot by the fire, than to put it under a cover, that the exhalations may freely escape. In making up the fire for roasting, it should be three or four inches longer at each end than the joint on the spit, or the ends of the meat cannot be properly browned. Half an hour at least before the roasting begins, prepare the fire by putting on a few coals, so as to be sufficiently kindled by the time the fire is wanted. Put some of them between the bars, and small coals or cinders wetted at the back of the fire. In some families not provided with a jack or spit, a bottle-jack is a valuable instrument for roasting; and when this cannot be had, a skewer and a string, or rather a quantity of coarse worsted loosely twisted, is as philosophical an apparatus as any, and will answer the purpose quite as well. Do not put the meat too near the fire at first. The larger the joint, the farther it must be kept from the fire; if once it gets searched, the outside will become hard and will acquire a disagreeable taste. If the fire is prevented from penetrating it, the meat will appear done, before it is little more than half-roasted, besides losing the pale brown colour which has so inviting an appearance in roasted meat. From ten to fourteen inches should be the distance at which the joint is placed when first put down, and afterwards it should be brought nearer by degrees. If the joint is thicker at one end than the other, lay the spit slanting, with the thickest part nearest the fire. When the meat is thin and tender, the fire should be small and brisk; but for a large joint, the fire should be strong, and equally good in every part of the grate, or the meat will not be uniformly done. Stir the fire well before the meat is set down, keep it clear at the bottom, and take care that there are no smoky coals in the front. If a jack be used it should be carefully oiled and kept clean, and covered from the dust, or it will never act well. The dripping-pan should be placed at such a distance from the fire as

just to catch the drippings; if it be too near, the ashes will fall into the pan and spoil the contents. If too far from the fire, the drippings will not only be lost, but the meat will be blackened and spoiled by the fetid smoke, which will arise when the fat falls on the live cinders. The meat must be well basted, to keep it moist. When it does not supply dripping enough for this purpose, add some that has been saved on some former occasions, and properly prepared: this answers as well, if not better, than butter. Roasting meat should not be sprinkled with salt till nearly done, as it tends to draw out the gravy. Basting with a little salt and water when the meat is first laid down, is often done, but the practice is not good. Where the fat is very fine and delicate, it is best to cover it with writing paper, to prevent it wasting; but fat in general is as well exposed to the action of the fire. Half an hour before the meat is done, prepare some gravy, if necessary; and just before it is taken up, put it nearer the fire, to brown it. If it is to be frothed, baste and dredge it carefully with flour. When the joint is quite done, take it up immediately, as every moment beyond that is injurious to the meat. With respect to the time required for roasting, the general rule of a quarter of an hour to a pound of meat is a pretty fair estimate, but it will not do for all kinds of joints. The use of a meat screen must also be taken into consideration, as it tends materially to assist the operation, by concentrating the heat and excluding the cold draughts of air. Attention must be paid to the nature of the joint, whether thick or thin, the strength of the fire, the nearness of the meat to it, and the frequency with which it is basted. The more it is basted, the less time will it take, as it keeps the meat soft and mellow on the outside, and the fire acts upon it with greater force. Much will depend on the time the meat has been kept, and on the temperature of the weather. The same weight of meat will require twenty minutes or half an hour longer in cold weather to roast it than in warm weather; and the same principle applies to meat when fresh killed than when it has been kept till it is tender. If meat should happen to get frozen, it should be thawed, by lying some time in cold water; and then be thoroughly dried in a clean cloth previously to being laid down before the fire. The mean time of roasting for various joints and articles of food may be estimated as follows:—

Sirloin of beef, from fifteen to eighteen pounds, four hours.

Ribs of beef, same weight, four hours.

Collared ribs, about three hours and a half.

Haunch of venison, from three to four hours.

Haunch, if in paper and paste, from four to five hours.

Leg of mutton, of eight to ten pounds, two hours and a half.

Shoulder, of eight pounds, two hours.

Fillet of veal, of ten pounds, stuffed, three hours.

Brisket of veal, of eight pounds, two hours.

Loin, of eight to nine pounds, two hours.
Leg of lamb, of six pounds, one hour and a half.

Loin, of three to four pounds, one hour and a quarter.

Leg of pork, of eight pounds, two hours and three-quarters.

Loins of pork, of six pounds, two hours.

Goose, if large, fifty minutes to an hour.

Green goose, fifty minutes to an hour.

Duck, if large, fifty minutes.

Hare, an hour and a quarter to an hour and a half.

Turkey, from two and a half to three and a half hours, according to size.

Reveret, fifty minutes.

Rabbit, large, one hour.

Wild duck, thirty-five minutes.

Partridge, large, thirty minutes.

Pigeon, from twenty to twenty-five minutes.

Chicken, from twenty to fifty minutes, according to size.

Blackcock, from an hour to an hour and a quarter.

Sucking-pig, from an hour and a quarter to two hours, according to size.

Fowl, large, sixty-five minutes.

Ox-heart, stuffed, from two hours to two hours and a half.

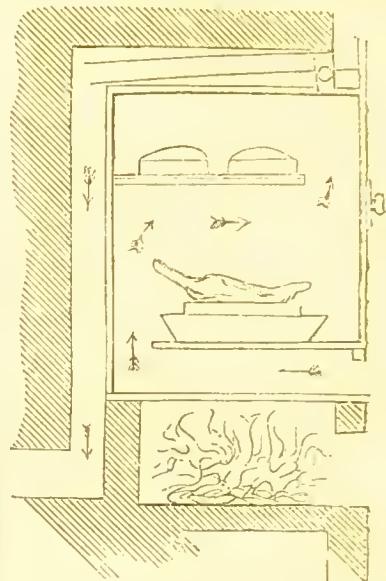
Calf's heart, one hour.

Grouse, thirty-five minutes.

In a dietetic point of view, roasted meat is not so easily digested as boiled meat, but it is more nutritious. It retains, moreover, the gelatine, which is greatly dissolved out in the process of boiling. It, however, the cooking is carried too far, and the meat be over-done, its nutritive properties are impaired. On the other hand, if meat is under-done, although more nutritious, it is certainly less digestible. In placing paper over fat, to preserve it, never use pins or skewers, they operate as so many taps to carry off the gravy; besides, the paper frequently starts from the skewers, and is, consequently, liable to take fire, to the great injury of both the flavour and the appearance of the meat. For these reasons, always fasten on the paper with tape, twine, or any other suitable string.

ROASTING OVEN.—Apparatus for roasting meat are made in various forms, intended to possess the combined advantages of an ordinary oven and roasting convenience. The accompanying engraving represents a general section of the roasting oven as it is now usually executed. The body of the iron roaster is of a square form, larger or smaller, and set in the brickwork with a fire below it. The fire, which burns on the bars, ascends round both sides of the roaster in a cavity left between it and the brickwork, passes over the top in a similar cavity, and then descends by the back of the roaster, in the direction of the arrows, making its exit by a horizontal flue situated at the lower part on the left, and goes at last in the perpendicular flue to the top of the house. Within the oven are two shelves, on which to place the dishes. In the circulation of hot air, when required, there is an aperture beneath the door of the roaster,

having a register to close it when it is not wanted. When hot air is to circulate, this register is opened, and the air which is heated by the bottom of the roaster, turns



out at the furthest end of the lower shelf, as represented by the arrow; passes over the meat placed in its pan and gridiron, ascends through the vacancy occasioned by the upper shelf not reaching to the front, and finally passes off into the tube at the top of the roaster, which can be closed by a register, moveable by a small rod coming to the front. This hot air then joins that from the fire, and passes into the flue.

ROBERT SAUCE.—Put an ounce of butter into a saucepan; set it over the fire, and when browning, throw in a handful of onions cut in small dice; fry them brown, but do not let them burn; add half a spoonful of flour, shake the onions in it and give it another fry; then put four spoonfuls of gravy, and some pepper and salt, and boil it gently ten minutes; skim it. When ready to serve, add a teaspooonful of made mustard, a spoonful of vinegar, and the juice of half a lemon, and pour it round the steaks or chops. They should be of a fine yellow brown, and garnished with fried parsley and lemon. The sauce must not boil after the mustard is put in, otherwise it will curdle.

Butter, 1 oz.; onions, handful; flour, $\frac{1}{2}$ tablespoonful; gravy, 4 tablespoonfuls; pepper and salt, to season; mustard, 1 tea-spoonful; vinegar, 1 tablespoonful; lemon, juice of $\frac{1}{2}$ of 1.

ROCHELLE SALT.—This salt is a mild aperient taken in ounce doses, and more agreeable than Epsom salts. To produce it, dissolve twenty ounces of sub-carbonate of soda in ten pints of water, add, while

boiling, twenty-four ounces of cream of tartar, filter, evaporate to a pellicle, and set aside to crystallize.

ROCK CAKES.—1. Clean and dry a pound of currants, and add the same quantity of flour, well dried, half a pound of beaten sugar, half a pound of butter, the yolks of eight eggs, and the whites of six, well beaten separately; add a little nutmeg and cinnamon; mix the whole well together, the butter having been first beaten to a cream; drop the paste in small quantities, on buttered paper, and bake on tins in a quick oven. 2. Mix a quart of cream with twelve tablespoonfuls of flour, the yolks of eight eggs, well beaten, six tablespoonfuls of finely pounded loaf-sugar, a little rose-water, and half a glass of brandy or ratafia; beat all well together; heat the wafer irons, put into them a tablespoonful of the butter, and turn the irons, that it may bake equally. While hot, roll them round a stick.

Cakes. 1. Currants, 1lb.; flour, 1lb.; sugar, $\frac{1}{2}$ lb.; butter, $\frac{1}{2}$ lb.; eggs, 8 yolks, 6 whites; nutmeg and cinnamon, to flavour.—2. Cream, 1 quart; flour, 12 tablespoonfuls; eggs, 8 yolks; sugar, 6 tablespoonfuls; rose-water, to flavour; brandy or ratafia, $\frac{1}{2}$ glass.

ROCK, IRISH.—Blanch a pound of sweet and an ounce of bitter almonds; pick out a few of the sweet almonds, cut them in strips, and blanch them in rose-water; pound the rest in a mortar with a tablespoonful of brandy, four ounces of pounded and sifted loaf-sugar, and half a pound of salt butter washed; pound them till the mass appears very white, and set in a cool place to stiffen; then dip two tablespoonfuls into cold water, and with them form the paste as much like an egg as possible; place on the bottom of a glass dish a small plate or saucer reversed, and pile the rock high up; stick over it the cut almonds, and ornament with sweetmeats.

Cakes. Sweet almonds, 1lb.; bitter almonds, 1oz.; brandy, 1 tablespoonful; sugar, $\frac{1}{2}$ lb.; salt butter, $\frac{1}{2}$ lb.

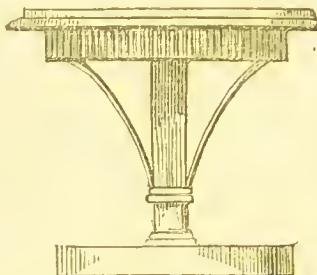
ROCKERY.—A rockery, if judiciously disposed, is a very fitting arrangement for a town garden, as it presents a greater apparent extent of space, in consequence of its abruptly undulated surface admitting of the walks being carried along within a few feet or yards of each other, and yet being completely hid. Rockwork should always be kept in the background, if artificial; and in a gardeau, placed on a level surface, because it is an attempt to imitate nature, where all around it is art. The case is different where the situation is naturally rocky, and where projecting portions of rock can be laid bare to form the ground-work. It may be advantageously employed in the formation of screens for shutting out objects which are not wished to be seen; to render more secluded and sheltered, small places, such as villa gardens: and it may form the termination of a long or even principal walk, provided nothing better can be substituted. It should never rise out of the smooth-dressed lawn, nor be placed too near the house, shrubbery and terraced banks,

being better for shutting out objects in the foreground. When the culture of rock plants is an object, the rockery should present two or more aspects, one damp and shaded, the other fully exposed to the sun. Ferns and plants of shade should occupy the former, while sun-loving plants should inhabit the latter. Rocks associate naturally with water; when a pool can be placed at its base, with its margin sufficiently broken and rugged, the effect will be heightened, and the plants derive advantage from the watery exhalations rising during the heat of summer. Every appearance of art and approach to regularity will be out of place in the construction of rockery. On the contrary, the surface of the whole cannot be too irregular, or too varied, indented, or prominent. An additional projection may be given to some of the parts by moderate-sized bushes or short-stemmed weeping trees. Evergreen shrubs or low trees will be particularly useful. For ordinary practice, the materials of which a rockery, however small, is formed, should be on their broadest or flat sides, and not be set on edge, much less be placed with their points upwards. Any great elevation should not be sought in small rockeries. This would be inconsistent with their breadth, and would render them too prominent and artificial. They should not be carried higher than the point at which they can be well supported and backed with a broad mass of earth and vegetation. Additional height may sometimes be given, if desired, by excavating into a hollow the base from which they spring. Rocks should appear to spring out of the polished grassy lawn; for grass and rocks do not harmonize. The vegetation around the base of rockeries should be of rustic plants, such as the varieties of our hardy native heaths and similar plants. These should, however, bear no resemblance to having been planted, but as if they had been brought in large masses, and scattered irregularly around the margin. Rockwork may be introduced both in the gardenesque and picturesque styles of flower-gardens, but never into the geometric. The intention of rockwork is to shut out objects not wished to be seen; to divide the garden into different compartments; to cover sterile banks, in the gardenesque style; and to imitate natural rocks, cascades, Alpine rivulets, and to divide into different compartments, or to exemplify the natural stratification of some particular locality, in the picturesque style. To accomplish these with judgment and taste, nature must be imitated as closely as possible. The rockwork being formed should be sufficiently clothed with plants indigenous to similar situations naturally. The rocky vine, the mountain brow, and the sea beach, are the most fertile sources of materials for a rockery; and it is necessary in selecting them to pay minute attention to the manner in which the various rocks are deposited in their beds, and also to the mosses, heaths, and ferns which are congenial to them; for in proportion as the selector shall succeed in imitating nature will he please his own

eye, and gratify others. Having fixed on the quarter whence materials are to be procured, the next step is to find out an intelligent workman, who may execute the charge intrusted to him with care. On this a great deal depends, and some pains should be taken to make him understand thoroughly what is wanted. The size of the stones should always be varied, but proportioned upon the whole to the intended size of the rockwork. A number of detached erections never look well; they are stiff and artificial. The whole should show an evident and well-defined connection; and with regard to the stones, the greatest possible variety in form and size should be studied. The foundations should consist of mounds of earth, which answer the purpose as well as any more solid erection, and will make the stones go farther. Rocks of the same kind and colour should be placed together; if intermixed, they seldom wear a natural appearance. A dark cave penetrating into the thickest part of the erection is not very difficult to construct, and when encircled by ivy, and inhabited by a pair of horned owls, it will form a very interesting object. Rock plants of every description should be profusely stuck around, and in one short twelvemonth, the whole scene will exhibit an impress of antiquity far beyond anticipation. The whole should be enclosed with trees of large foliage, that the visitor to the scene may meet with it unexpectedly. Water, in all cases, adds greatly to the general effect, and a small pond permits the construction of a rocky island, which should be formed with jutting points for the sake of the reflection in the water. By a simple expedient, streams of water may be made to issue from the rocks, or to sport into the air and fall into beautiful cascades. Rock-work should be, in general, an independent feature. It rarely looks well when piled against a wall, around the roots of a tree, or in any situation where it is over-shadowed by trees; in short, where it does not form the prominent feature in the scene. It looks well near water, and merging into it; or in an open airy garden where it is surrounded by a gravel walk; but it does not look so well when rising from turf, without an adjoining walk, or where large shrubs grow up amongst the stones. Indeed, it may be laid down as a general principle, that rock-work should either adjoin gravel or a piece of water, and that it should seldom or never adjoin trees or grass, or walls or buildings. Rockeries may, however, be made to answer one or two simple purposes independent of ornamentation. Where there are raised banks between one part of a garden and another, rocks can be employed to face the more private side of them, and will contribute to their solidity, at the same time that they increase their propriety and interest. If, again, a walk he cut through a bank, rocks may be used to hold up the sides of the opening when very steep. Or where a walk travels along a narrow hollow between two banks, the slopes of the bank can be partially covered with masses of rock. In both these last

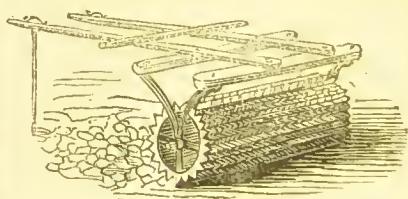
cases, a miniature and imperfect imitation of a small defile will be produced, and may be made very consistent and natural. The plan will be particularly serviceable where the hollow has to be made as narrow as possible, and the banks have consequently to be kept nearly upright.

ROCK-PLANT STAND.—A picturesque effect is produced in the garden by elevated stands for rock-plants of the rarest kinds,



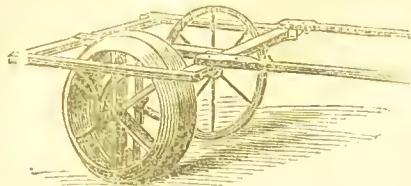
and most minute species. The use of such a stand is twofold, namely, preserving them from being run over by stronger young kinds, and placing them in a more convenient position to be seen.

ROLLER.—An agricultural instrument constructed of wood, stone, or cast-iron, according to convenience, or the purposes for which it is to be used. For tillage lands the roller is used to break the lumps of earth, and in some cases to press in and harden the ground about newly-sown seed. In constructing heavy rollers, they should not have too great a diameter, whatever the material be of which they are formed, as the pressure is diminished when the instrument is of very large size, by its resting on too much surface at once, except an addition of weight in proportion be made. By having the roller made small, when loaded with some weight, a much greater effect will be produced, and a considerable saving of expense effected in the construction of the implement. A species of roller called the clod-crusher, as seen in



the engraving, consists of east metal discs, or roller parts, placed loosely upon a round axle so as to revolve independently of each other. The outer surface of each roller part is serrated, and has a series of sideways-projecting teeth, which act perpendicularly in breaking clods. The size, six feet wide by two and a half in diameter, consists of twenty-three roller parts. Each alternate ring is made larger in the eye, and in

revolving, causes an up-and-down motion along the entire surface of the roller, thereby increasing the power and effecting the best means of self-cleansing. Another kind of roller, sometimes called the pressing plough,



generally consists of two cast-iron wheels, for the purpose of impressing two small seed gutters or drills on the furrow slices turned over by the common plough, and a third wheel for running in the bottom of the furrow for the purpose of keeping the machine steady. The wheels are kept clean by scrapers. The implement is used in breaking up clover leys for wheat. The advantages are said to be a firm bed for the seed, by which it is not liable to be thrown out in the winter season, and not so liable to be attacked by the grub and wire worm.

ROLLS.—A species of fancy bread which may be made in a variety of ways, as follows:—*Dinner or Breakfast rolls.*—Crumble down very small indeed an ounce of butter into two pounds of the best flour, and mix with them a saltspoonful of salt. Put into a basin, a dessertspoonful of solid well-purified yeast, and half a teaspoonful of pounded sugar; mix these with half a pint of warm new milk; hollow the centre of the flour, pour in the yeast gradually, stirring to it sufficient of the surrounding flour to make a thick batter; strew more flour on the top, cover a thick double cloth over the pan, and let it stand in a warm kitchen to rise. In winter it must be placed within a few feet of the fire. In about an hour, should the leaven have broken through the flour on the top, and have risen considerably in height, mix one lightly-whisked egg, or the yolks of two, with nearly half a pint more of quite warm new milk, and wet up the mass into a very smooth dough. Cover it as before, and, in from half to three-quarters of an hour, turn it on to a paste-board, and divide it into twenty-four portions of equal size. Knead these as lightly as possible into small round, or olive-shaped rolls; make a slight incision round them, and cut them once or twice across the top, placing them, as they are done, on slightly-floured baking sheets an inch or two apart. Let them remain for fifteen or twenty minutes; then wash the tops with yolk of egg mixed with a little milk, and bake them in a rather brisk oven from ten to fifteen minutes. Turn them upside down upon a dish to cool after they are taken from the tins. An additional ounce of butter and another egg can be used for these rolls when richer bread is liked, but it is much less wholesome than a more simple kind. A cup of good cream

would be an admirable substitute for butter altogether, rendering the rolls exceedingly delicate both in appearance and flavour. The yeast used for them should be stirred up with plenty of cold water the day before it is wanted: and it will be found very thick indeed when it is poured off, which should be gently done. Rather less than an ounce of good fresh German yeast may be used for them instead of brewer's yeast with advantage.

French rolls.—Take a pint and a half of milk quite warm; and a half a pint of small-beer yeast: add sufficient flour to make it as thick as butter; put it into a pan; cover it over and keep it warm; when it has risen to its utmost height, add a quarter of a pint of warm water, and half an ounce of salt; mix them well together; rub into a little flour two ounces of butter; then make the dough not quite so stiff as for bread; let it stand for three-quarters of an hour, and it will be ready to form into rolls; let them stand afterwards until they have risen, and bake them in a quick oven. *Brentford rolls.*—Mix together two pounds of flour, a little salt, two ounces of sifted sugar, four ounces of butter, and two eggs beaten with two tablespoonsfuls of yeast and about a pint of milk. Knead the dough well and set it to rise before the fire. Bake a dozen rolls, batter tin plates, and set them before the fire to rise till they are of a proper size, then bake them for half an hour. *American potato rolls.*—Choose five large potatoes, boil, peel, and wash them well; then rub them through a sieve; to each potato allow a pint of sifted flour, a tablespoonful of strong fresh yeast; a gill of milk-warm water; a saltspoonful of salt; the yolk of an egg, and an ounce of butter; mix together in a large broad pan the flour, the mashed potatoes, and the salt. Make a hole in the centre of the mixture, and pour into it the yeast mixed with the warm water. Sprinkle a little flour over the top, and mix in a little round the sides of the hole. Cover it with a clean cloth, and over that a flannel, and set it near the fire to rise. When the dough is quite light and cracked all over the surface, knead in the butter and also the yolks of eggs, having previously beaten them well, and add a small teaspoonful of soda dissolved in a little warm water. Then divide the dough into equal parts, make it into long-shaped rolls, and lay them in a tin or iron pan sprinkled with flour. Cover them, and again set them to rise in a warm place. When perfectly light (which should be in about an hour), set the pan in an oven, and bake the rolls brown. They are best when quite fresh. Pull them open with the fingers and eat them with butter. *Geneva rolls.*—Break down into very small crumbs three ounces of butter with two pounds of flour; add a little salt, and set the sponge with a large tablespoonful of solid yeast, mixed with a pint of new milk, and a tablespoonful of strong saffron-water; let it rise for a full hour, then stir to a couple of well-beaten eggs as much hot milk as will render them lukewarm, and wet the rolls with them to a light lithe dough; leave it for about forty

minutes longer, mould it into small rolls, brush them with beaten yolk of egg, and bake them from twenty minutes to half an hour. The addition of six ounces of sugar, three of butter, half a pound more of currants, the grated rind of a large lemon, and a couple of ounces of candied orange-rind, will convert the whole into excellent rolls. When the flavour of saffron is not liked, omit it altogether.

Dinner or breakfast rolls.—Butter, 1oz.; flour, 2lbs.; salt, 1 saltspoonful; yeast, 1 dessertspoonful; saffron, $\frac{1}{2}$ teaspoonful; milk, $\frac{1}{2}$ pint; eggs, 1 or the yolks of 2; milk, $\frac{1}{2}$ pint. **French rolls.**—Milk, 1 $\frac{1}{2}$ pint; yeast, $\frac{1}{2}$ pint; flour, sufficient; warm water, $\frac{1}{2}$ pint; salt, $\frac{1}{2}$ oz.; butter, 2ozs. **Brentford rolls.**—Flour, 2lbs.; salt, sufficient; sugar, 2ozs.; butter, $\frac{1}{2}$ lb.; eggs, 2; yeast, 2 tablespoonfuls; milk, 1 pint. **American potato rolls.**—Potatoes, sufficient; flour, 1 pint to each potato; yeast, 1 tablespoonful; water, 1 gill; salt, 1 tablespoonful; egg, yolk of 1; butter, 1oz.; soda, 1 teaspoonful. **Geneva rolls.**—Flour, 2lbs.; butter, 3ozs.; yeast, 1 tablespoonful (saffron, 1 spoonful); water, less than $\frac{1}{2}$ pint; new milk, 1 pint; salt, sufficient.

ROLLY-POLY PUDDING.—This well-known pudding is made by rolling out a thin layer of suet or butter paste as for puddings, upon which either a preserve or dried currants are spread evenly, leaving an inch bare at the edges all round except on that next the cook, and then the whole is rolled up into a long pudding, closed at the ends by pinching the paste, and enveloped in the same way in a cloth, which is tied with a string at each end, and boiled about one hour.

ROMANCES.—Works of fiction differing from the novel, inasmuch as the scenes and incidents are not taken from every-day life, but are, for the most part, the author's own creation. Among the best authors of this class of literature are Mrs. Radcliffe, William Godwin, Maturin, M. G. Lewis, Beckford, Jane and Anna Maria Porter, Mrs. Shelley, Thomas Hope, Plumer Ward, G. P. R. James, and W. H. Ainsworth.

ROOFING—The covering of buildings, generally very complicated and often exercising all the ingenuity of even a skilful workman. Roofs should always be put together on the ground; and, after they have had all their parts marked, to be taken to pieces again, in order to be raised to their proper places on the walls. Corrugated iron roofs are composed of sheet iron, impressed so as to present a surface of semi-circular ridges, with intervening furrows lengthwise of the sheet. By this means the sheet, from a plane flat surface having no strength but from its tenacity, becomes a series of continued arches, abutting against each other, and the metal, by this new position, will, after undergoing the process of corrugation, bear upwards of seven hundred-weight without bending in the least degree. Iron so furrowed will be preferable to common sheet iron for covering a flat roof; because the furrows will collect the water, and convey it more rapidly to the eaves;

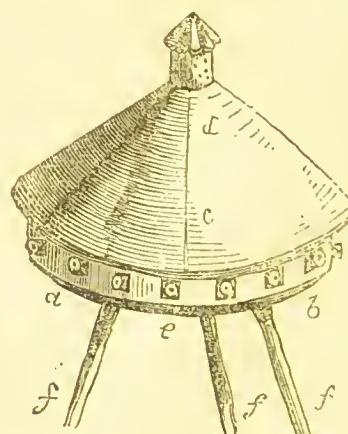
but this is a trifling advantage compared with others which follow. Suppose that, in addition to furrowing a sheet lengthwise so as to give it a flat appearance, it is also bent in one general curve in the direction of its length, causing it to approach the form seen in the engraving: an arch of great



strength is thus supplied, capable of serving as a roof without rafters, or any description of support, except at the eaves or abutments. It is evident that, the span of any roof being given, segments of corrugated iron may be riveted together so as to form such an arch as may be deemed proper for covering it.

ROOK PIE.—Draw and skin six or eight rooks, let them lie in cold water one or two hours, cut out the back-bones, wash the birds, season them lightly with pepper and salt, and pack them closely into a pie-dish; add half a pint of gravy or water, and lay over them half a pound of fresh butter; cover the dish with a flour-and-water paste, and bake for two hours. The following day take off the coarse, and cover with a puff-paste, and bake it till it be sufficiently done.

ROOKS, TO DESTROY.—The rook has a bad reputation, for the injury it occasions to growing crops and vegetation generally. Many devices have been formed to drive these destructive birds from the field: one of the most common of which is the scarecrow. After a time, however, the birds become familiar with these objects, and they cease to exercise any influence. Gunpowder is the most effectual means of scaring away rooks. Rags steeped in a solution of gunpowder, dried, and placed on the windward

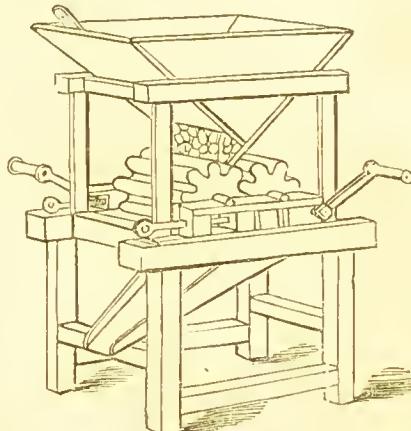


side of a field, will act as a scare as long as they last, but the renewal of them occasions a good deal of trouble. One of the best contrivances is that shown in the an-

nexed figure, which can be made to keep up a fire throughout the day. It consists of a circular plate of strong tin, *a b*, eighteen inches in diameter, upon the circumference of which is soldered a hoop of equally strong tin, three inches in height, and through which are pierced twenty-four embrasures, three-quarters of an inch square each, at equal distances from one another. At each embrasure is inserted brass cannon, four inches in length, upon a carriage soldered to the bottom-plate, and removable at pleasure by means of a clasp. The plate and rim are covered by a conical tin top, *c*, with an eave projecting one inch, to prevent the drops of rain running down the rim. The cover is surmounted with a cylindrical lantern, *d*, two inches and a half in diameter, pierced with holes. The cannon are loaded with fine gunpowder, and wadded with woollen wadding, to prevent its ignition. They are fired with a match consisting of cotton thread dipped in a solution of sultpetre; and the thread is brought over and held upon the touch-hole of each cannon by a bit of copper-wire attached to the carriage. The match-thread is made longer or shorter, as the time is determined on between the discharge of each cannon, and to dispose of it for this purpose, the central part of the plate *a b* is divided by perpendicular partitions of tin, so arranged as to form numerous alleys, along which the match-thread is made to traverse at such a length as to burn it in down in time to reach the touch-hole at a given hour. Plate *a b* is affixed to a circular board *e*, nine inches in diameter, and one inch in thickness; and in its circumference are attached three legs, *f f f*, which support the apparatus in tripod form, at a height sufficient to elevate it above the standing corn. The battery is placed in the part of the field most frequented by the rooks, and where it may best be seen. Suppose that the guns are loaded and the match lighted at five in the morning, and that by eight at night it is time to cease firing, which is fifteen hours, in which time thirty-seven and a half minutes will require to elapse between the discharge of each of the twenty-four cannons. Such discharges are much more to be depended on for regularity than the firing of any fowling-piece by a herd-boy. In addition to the discharges of the guns, if a piece of woollen rag, steeped in a solution of gunpowder and dried, were placed in a cup of tin at *a*, immediately below the lantern of the cover, and set fire to, the smoke arising from it would still further intimidate the rooks, and cause the discharge of the cannons at longer intervals to suffice. The position of the battery should be changed every day, and a piece of laid corn is the best spot for erecting it on, to be best seen from a distance. It may be set amongst potatoes, as also in a plot of turnips growing for seed. The number of such apparatus required for a farm would depend on the number of the corn-fields subject to the attack of birds, and also on the succession or ripening of the different crops. Batteries could be made of any size and to fire as often as desired, and the smaller-sized ones, when

longer in use than all the cannons can reach the time, the canous might be loaded oftener than once a day.

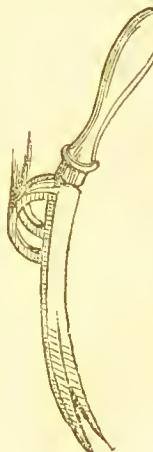
ROOT BREAKER. An implement used for breaking or bruising potatoes, turnips, carrots, or other raw roots, into small or moderate-sized pieces before giving them to cattle or horses. It is composed of two widely-fluted rollers placed under a hopper, turned by two men. The same implement



may be set so close by means of two screws as to serve for a whin-bruiser, or for breaking beans or corn of any kind.

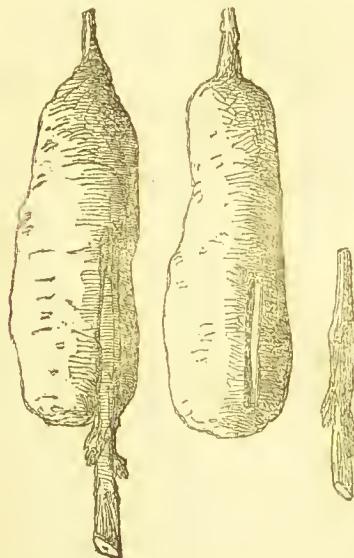
ROOT EXTRACTER.

—An excellent implement for taking up soiled roots, &c., and which may be carried in the pocket. The mode of using it is to thrust it deeply into the ground, so placed that the root may be taken between the prongs. The bent part near the handle, acting as a fulcrum against the surface of the ground, greatly facilitates the withdrawal of the root without breaking it, when the handle is pressed towards the ground. This implement will be found not only convenient, but will prevent injury being done to the roots.



ROOT-GRAFTING AND PRUNING.—Root-grafting is a method often practised in nurseries in cases where stocks of the species intended to be increased are scarce, and at other times, to economise time, and the operation can be performed during the winter and under protection, so that, when spring arrives, they may be taken out and planted in nursery lines. One precaution ought to be taken in this mode—namely,

washing the top parts, at least, of the root stocks, to prevent the possibility of earthy matter getting between the scion and the stock. When the attachment has taken place, and planting is completed, draw up the earth around the neck of the plants so as to become the point of union. The rarer species of oaks, for example, may be grafted upon the roots of the common sorts; and the otherwise useless roots left on the ground, upon removing old thorn hedges, may be used as excellent stocks upon which to attach peony-grafts. The tree peony has been successfully grafted upon the flesh roots of the herbaceous kinds of the same genus; the melon and cucumber, the potato and love-apple, and many others have been or are capable of being grafted on each other. In the case of the tree peony, the operation is performed from the middle of July to the middle of August. The tubers throw out roots in autumn, and are then taken up and potted, and preserved under cover during winter. The operation is exceedingly simple, and consists in selecting single tubers of the plant, in which a trian-

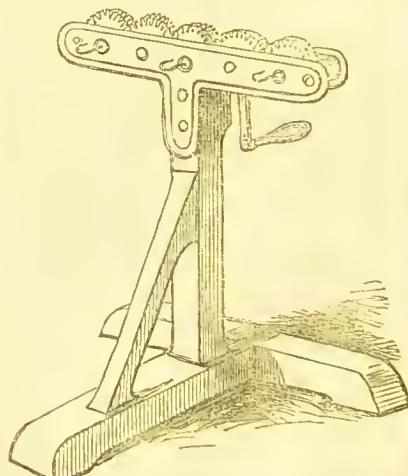


gular notch is cut near its top; to this notch a scion of the tree sort is made to fit, having two or three buds upon it; when placed it is tied with soft matting, and clayed or waxed over in the usual manner. If the plant which supplies the scion be scarce, then one bud may be used instead of three. In selecting the tubers for this purpose, barren ones, that is, those having no visible eyes—are as good, if not possibly better, than those which have them. By this means dahlias may be multiplied largely, as every tuber is suitable for a stock, while only the crown of the whole root produces cuttings. Root-pruning is adopted as a check to over-luxuriance. This it does effectually, for such

excess of growth arises from the roots imbibing too much food; by pruing, and thus reducing their number, therefore, we reduce their imbibing power, and it is found that such pruning checks the production of leaf-buds, and will ease any kind of fruit-tree to produce blossom-huds, provided the tree is healthy, and that its barrenness arises from over-luxuriance. To know what proportion of the roots to cut away, the trees may be supposed to be divided into three classes. *First*, trees of moderate luxuriance; *second*, those which may be termed robust; *third*, those of gross habit. To a further idea, it may be said that the first class will make young shoots on an average a foot in length; those of the second, two feet; and the third, three feet; the latter, indeed, frequently burst into lateral or side shoots, from the young shoots of the same season. From the first class, therefore, it is advisable to cut away about a sixth part of the roots; from the second class, a fourth part; and from the third class, a third part. It must be borne in mind that the extremities of the roots alone should be cut off and the surface of the roots preserved by every possible means.

ROOTS, TO GATHER AND PRESERVE. — Roots should be gathered in spring with but few exceptions, and are better for being fresh. Roots to be dried should be well washed and sliced, unless they are preserved for the sake of the bark, when they must be merely washed and dried. The process of drying may be simply performed by stringing the pieces together, or scattering them on paper trays, and exposing them for a sufficient time to a gentle heat, say from ninety to one hundred degrees.

ROPE TWISTER. — An implement necessary on large farms, and desirable on



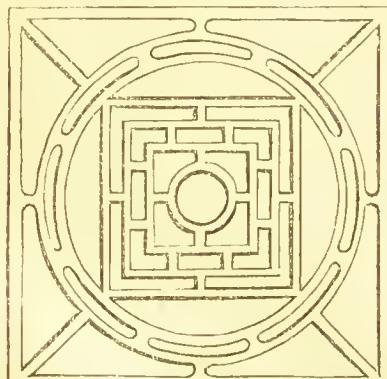
those of ordinary size, by which straw ropes for use in thatching, may be twisted with

greater speed and accuracy than is possible with the slow and awkward implements formerly employed, and which required two pairs of hands to every rope. The mode of its action is plain enough. The turning of the handle gives motion to five wheels, the centre one being on the axis of the handle, and all toothed into one another; and the axis of every alternate wheel is lengthened out into a hook on the other side from the handle, over which a wisp of straw being doubled, the twisting of the rope commences and regular additions of material being skilfully made, continues until any length that may be desired is obtained.

ROSE. CULTURE OF.—The rose may be propagated by a variety of methods; most kinds by cuttings, the best time for making which is in April. The most convenient-sized pots in which to place the cuttings are five inches across; fill them with moderately rich light earth, press it firmly down, then fill the pots quite up to the rim with silver sand; give a gentle watering from a fine-rosed watering-pot, then divide the cuttings into lengths of about four inches, remove all the leaves except those belonging to the top buds; make the cut very smooth across, just under the lowest bud; the cutting is then ready to be planted. Have a small stock about as thick as a quill, and thrust it into the soil just the depth of the cutting, so as to leave the top bud out: close the earth firmly to the bottom of the cutting with the stick; place the cuttings close to the edge of the pots, with the leaves of all pointing inwards, then close up the holes with a little of the sand, and give a gentle watering. The best situation to place the pots in is a pit, with hand-glasses over them. If there is not that convenience, plunge the pots in coal ashes on a shady border, covering them with hand-glasses. Shift into larger pots as they require. For cuttings in the open ground, choose a shady border, next a low wall or hedge—the latter to be close-clipped with the garden shears. Let the soil be well dug and chopped small, and the surface raked very fine; then pour some water upon it, and let it stand a day, to become moderately dry again. Prepare the cuttings as directed above, and expose them as little as possible to the sun and air; they may be preserved fresh by covering them with a little damp moss or hay as soon as they are prepared. As soon as a sufficient number are ready, open a trench with a small spade at the end of the border. Chop the side of the trench furthest from you straight down, just a sufficient depth between the topmost bud and leaf out of the soil; then place the cuttings against this upright bank, about three inches apart. When the row is filled with cuttings, with your spade put the soil against the cuttings, and with your foot tread it firmly to them. Take great care that the soil is quite close and firm around each. Then fill up level with the top of the row of cuttings another portion of the soil, until there is a bank of earth six inches distant from the first row. Chop down the outermost edge of the soil, so as to leave another upright bank to set

the second row of cuttings against, and so proceed from row to row, till the span set apart for this purpose is filled. Examine a few of them occasionally after about six weeks, and if they are rooted, lift them carefully with the trowel or small spade, and either put them or plant them out in rows in a more open situation, where they are to grow and flower. *By budding.*—This mode is a very general one, and particularly for standard roses. For budding roses, the best time of the day is either early in the morning, or after three o'clock in the afternoon; cloudy moist days, are the most suitable. Cut off the heads of your stocks, and all the side branches to three, that is for standards. For dwarfs, cut off to within six inches of the ground; then, with the knife, make an incision on the upper part of the young side-branches, as close to the main stem as possible. The incision should be about an inch long, lengthwise in the branch. Cut a cross just at the top of this incision, in a direction somewhat slanting. Then take off the bud, previously cutting off the leaf, leaving part of the leaf-stalk. Cut away with the bud a portion of the bark from the parent stem, and a portion of the wood with it. This bud, and the bark, and the wood with it, should be altogether rather more than three-quarters of an inch long. Turn the bud over between your finger and thumb, and dexterously take out the greater part of the wood full in the eye of the bud. Then raise one side of the bark of the incision, in the shape of a T made in the stock, and with the ivory handle of the budding-knife slip in one side of the bark attached to the bud, then turn your knife, and lift up the other side of the incision, and the bud will drop into its place; pass the bark of the bud to the farther end of the incision, and, if any projects beyond the cross incision on the stock, cut it off. Then tie with worsted neatly, and the operation is complete. *By layers.*—The common mode is to lay down the young shoots of the preceding summer, late in autumn, or early in the succeeding spring; and then, with the exception of the moss-rose and one or two others, they form rooted plants by the next autumn. After the plants are removed from the stools, they are planted in nursery rows; and in a year, the blossom-buds having been carefully pinched off from the first laying down, they will be fit for removal to their final destination. The shoots are then to be pruned, and the soil stirred and enriched. An improved method of laying roses consists in entering the knife up the centre of the inward portion of the wood of the layer, and keeping the slit so formed open by a small piece of wood or a stone. *By suckers.*—Roscs send up many suckers annually, which may be taken up in autumn, winter, or early spring, with some rootlets attached; and the strongest may be planted out finally, and the weakest in the nursery for a year or two longer. They will readily grow, and will most of them produce flowers the following summer. When rose-trees have grown into large bunches, with many suckers, the whole

may be taken up and slipped, or divided into separate plants. The moss, and some others, furnish suckers but sparingly. *Soil and situation.*—The best soil is a rather strong loam; the deeper it is the better. It should be well-drained. Such land as will grow good wheat or good hops will grow fine roses. Next it should be rich to grow them fine: if not already so, it ought to have thoroughly decayed dung added to it. Bones dissolved in vitriol will be of great benefit to them, a manure that may be obtained of any respectable dealer. The rose-garden ought to open to the south and east, but be sheltered from the north and north-west winds. Tall beech or hornbeam hedges, are the best shelter against gales blowing from those points. Roses should not be planted so near trees as to be overhung by them, as the drip from the trees will prevent them from thriving, and injure the flowers. *Raising roses from seed* is an interesting pursuit, but little attended to in this country. It is easy in all points, except the obtaining of mature seed from the better varieties, what in our climate does not often occur in the open air; and this circumstance is doubtless the cause of the seeming neglect which has hitherto attended this part of their culture. When ripe berries can be gathered in October, they should be taken from the tree before they are much frozen; the seed cleared out, and at once buried in sand, placing first a layer of sand in a large pot, then a sprinkling of seed, and of some more sand, continuing them alternately till the pot is full; the seed is then to be kept till the following April, when it may be sown in the usual way, in pans of light loam, and plunged into a moderate hot-bed; some of it will come up the same season, and the remainder in the following; the young plants should be potted off as soon as they can be safely handled, and afterwards are to be treated with a frame, and nursed till strong enough to be trusted out of doors. No very definite directions can be given for



arranging the rosary, the working upon existing circumstances must determine it; though in general a series of beds, either circular or rectangular, are most conve-

nient, because by varying their size the several groups may be accommodated, and the method admits of additions being subsequently made without disturbing the established portion; but whatever its size or form, no other plant should be allowed on the prescribed space, or at least nothing more than a few prostrate growing things to cover the earth between the stems or in front of the borders. The preceding engraving is suggestive of a rosarium in keeping with the above-mentioned requisites. The approaches may be made through avenues of tall standards, the boundary marked by climbing kinds, trained in festoons upon chains suspended from posts, and as a central object, either a heap of large stones upon which the creeping kinds may ramble, half a dozen rustic pillars, supporting a roof to be covered with climbing sorts, or a little grove of creeping roses, will be appropriate.

ROSE LIP-SALVE.—Take eight ounces of sweet almond oil, four ounces prepared mutton snet, an ounce and a half of white wax, two ounces of spermaceti, and twenty drops of otto of roses; steep a small quantity of alkanet root in the oil, and strain before using. Melt the snet, wax, and spermaceti together, then add the oil and otto of roses.

ROSE LOZENGES.—To a pound of finely-sifted loaf-sugar, put an ounce of powdered gum arabic, or tragacanth; mix it into a stiff paste with rose-water, and grind up with the paste a little of the conserve of roses, which gives both flavour and colour; punch the mass into round or oval lozenges, each containing about fifteen grains, and dry them in a stove.

ROSE OIL.—Put any quantity of dried rose leaves into an earthen pipkin, cover them with olive oil, and keep it hot for some hours. The oil will extract both odour and colour. A little oil of rosemary may be added.

ROSE-WATER.—When the roses are in full bloom, pick the leaves carefully off, and to every quart of water put a peck of rose-leaves; put them in a still over a slow fire, and distil gradually; then bottle the water; let it stand in the bottle three days, and then cork it close.

ROSES, MILK OF.—Mix four ounces of the oil of almonds, with half a gallon of rose water, and then add forty drops of the oil of tartar.

ROSES, TINCTURE OF.—Put into a bottle the petals of the common rose and pour upon them spirits of wine: cork the bottle, and let it stand for two or three months. It will then yield a perfume little inferior to otto of roses. Common vinegar is much improved by a very small quantity of this mixture being added to it.

ROSEMARY, CULTURE OF.—A hardy under-plaut, evergreen slightly aromatic. The green is hardest as a plant, and is the sort generally used. The finest plants are raised from seed. Sow either broadcast or in small drills, six inches apart. The green is also raised by planting slips or cuttings of the young shoots in spring or summer in

a shady border. Let these be taken off from five to seven inches long, detaching the under-leaves. Set them in a row from six to twelve inches apart, nearly two-thirds into the ground: water at planting, and occasionally afterwards till they have struck. The plants will be strong and well-rooted by autumn, when they should be transplanted at proper distances. A light sandy soil assists exotic evergreens, that retain some of their original delicacy, to stand the winter; partly by preventing them from growing too luxuriant, and partly by not being a conductor of frost. In their final situations, train the plants either with a bushy head of moderate growth, or, if near a fence, in fan-like order.

ROSEMARY POMATUM.—Strip from the stem two large handfuls of recently gathered rosemary; boil it in a copper saucepan, with half a pound of hog's lard, until reduced to four ounces; strain it, and put in a pomatum pot.

ROSEWOOD.—A favourite wood for articles of furniture, especially those of a smaller description. It is considerably more expensive than mahogany. Many articles of rosewood furniture are veneered; but the best is of solid wood. The colour is permanent, except it be much exposed to the rays of the sun; and it takes a fine polish, which is improved by the application of French polish. It may, however, be kept in good condition, by being rubbed every day with a clean soft cloth.

ROSEWOOD, IMITATIVE.—Brush the wood over with a strong decoction of logwood, while hot; repeat this process three or four times; put a quantity of iron filings amongst vinegar; then with a flat open brush, made with a piece of cane, bruised at the end or split with a knife, apply the solution to the wood in such a manner as to produce the fibres of the wood required. After it is dry, the wood must be polished with turpentine and bee's-wax.

ROTATION OF CROPS.—The rotation or succession of crops is absolutely necessary for the successful and economical cultivation of the soil. Crops have been divided by agriculturists into exhausting crops, restoring crops, and cleaning crops. The most exhausting crops are usually considered to be those of corn, but all those that are allowed to ripen their seed, and which are carried off the ground, are also exhausting, but in different degrees. Even clover, tares, and grass cut green, are considered as exhausting, but in a less degree than those which are allowed to ripen. Restoring crops are such as are allowed to decay upon the ground; or are consumed upon it by domestic animals. Cleaning crops are such as are grown in drills, and undergo the usual operation of weeding, hoeing, &c.; the majority of these may be also regarded as exhausting crops. An exhausting crop should always be followed by a restoring or cleaning crop; or, where possible, by both combined. Crops should also succeed each other in such a way that the soil may not be exhausted of any one particular kind of nutriment. This is best effected by so

rotating the crops that plants which are nearly allied should not succeed each other on the same soil, or at all events not more than once.

ROT.—See SHEEP, TO BREED AND REAR.

ROTTEN-STONE.—An earth of ash-brown colour, very light, moderately hard, dry, and useful as a polishing powder. Mixed with oil, and applied with a leather, it is an excellent polisher of brass, steel, and zinc articles.

ROUGE.—A preparation for the toilet, and also for polishing jewellery, &c., made as follows:—Wash safflower till the water comes off colourless; dry and pulverize it, and digest the powder in a weak solution of crystallized carbonate of soda; then place some fine cotton-wool at the bottom of a porcelain or glass vessel, pour the filtered tinctorial solution on this, and throw down the colouring matter by gradually adding lemon-juice or white wine vinegar, until it ceases to produce a precipitate; next wash the prepared cotton in pure cold water, and dissolve out the colour with a fresh solution of soda; to the new solution add a quantity of finely-powdered French chalk, proportionate to the intended quality of the rouge; mix well, and precipitate with lemon-juice, as before; lastly, collect the powder, dry it with great care, with as little heat as possible, and triturate with a very small quantity of oil of olives.

ROUT DROPS.—Mix two pounds of flour, one pound of butter, one pound of sugar, one pound of currants, clean and dry; then wet into a stiff paste, with two eggs, a large spoonful of orange-flower water, the same each of rose-water, sweet wine, brandy; drop on a tin plate, floured. A very short time bakes them.

ROUT Flour, 2lbs.; butter, 1lb.; sugar, 1lb.; currants, 1lb.; eggs, 2; orange-flower water, rose-water, sweet wine, brandy, one dessert-spoonful each.

ROUX.—For ordinary purposes this may be made as it is wanted for use; but when it is required for various dishes at the same time, or for cookery upon a large scale, it can be prepared at once in sufficient quantity to last for several days, and it will remain good for some time. Dissolve, with a very gentle degree of heat, half a pound of good butter, then draw it from the fire, skim it well, give time for it to settle, pour it gently from the sediment into a very clean frying-pan, and place it over a slow but clear fire. Put into a dredging-box about seven ounces of fine dry flour; add it gradually to the butter, shake the pan as often as it is thrown in, and keep the thickening constantly stirred until it has acquired a clear light brown colour. It should be very slowly and equally done, or its flavour will be unpleasant. Pour it into a jar, and stir a spoonful or two, as it is needed, into boiling soup or gravy. When the butter is not clarified it will absorb an additional ounce of flour, the whole of which ought to be fine and dry. This thickening may be made in a well-tinned stewpan even better than in a frying-pan, and if simmered over a coal fire

it should be placed high above it and well guarded from smoke. *White roux.*—Proceed exactly as for the preceding receipt, but dredge in the flour as soon as the butter is in full simmer, and be careful not to allow the thickening to take the slightest colour; this is used for white gravies or sauces.

ROWING.—In practising this art, it may be laid down, as a general rule, that in calm weather, a light and sharp boat is preferable; and, in rough weather, a heavier and broader one. The learner, however, should not at first begin in too light a boat, nor should he practise in rough weather, until he gets acquainted with its management. To leave the shore, the rower should with the boat hook, push the boat off, head upon tide, or opposite to the current. To leave the stairs, the rower must either push the boat off with the boat-hook, or place the blur of the scull forward and nurse the boat out from the shore. This being done, the rower sits down to his sculls. These he puts on the rullocks, and turns the concave front, or pulling of the scull, towards the stern of the boat. The rower must sit amidships on the thwart or seat of the boat, otherwise she will reel to the side on which he is sitting, and much of his labour will be lost. He should sit with ease to himself, having his feet on the middle of the stretcher, and his legs not quite extended; but his knees, as he rows, should be brought down, and his legs stretched. In grasping the oar for the pull, hold the hand square and firm, but with sufficient freedom to let the muscles of the arm have play. The body is now to be inclined forward from the hips (*fig. 1*) till



the head comes nearly over the knees, and the arms extend till the knuckles come over the joints of the instep. The edge of the oar being now turned parallel with the water, so as to feel no resistance from the wind, the dip is made (*fig. 2*) and at the mo-

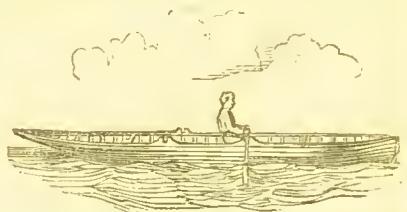


ment of doing this the oar is dexterously turned so that its edge cuts the water in descending, and being completely immersed and no more, the broad part of the blade is pressed strongly and firmly against the water by the pull. When the pull is fairly

and evenly given, and in such a way as that the whole power shall be brought to bear upou the water without any jerking or trembling of the oar, the time is come for lifting it out of the water (*fig. 3*), and in doing this,



the hand or hands are brought close to the side, a little below the chest, the oar is slightly turned or feathered as it rises to the surface then lifted, and the stroke then repeated (*fig. 4*). In river-rowing, when the



tide or current is with the rower, a learner should in general take the middle of the stream. When the tide or current is against the rower, he should take the sides; preferring that side on which, owing to the course of the river, the current is least. In bucking water the oars are suddenly turned, the concave parts facing the sculler or rower, who pushes from him. This forces the boat backwards. In turning a boat it is usual to back-water with one oar, or to hold water, at the same time that you pull with the other. If you wish to turn your boat's head to your left side, you pull with the right oar and back with your left, or pull with your left oar and back with your right. In meeting any other craft, the boat which comes with the tide must get out of the way. In this case, both boats, if close, lay the blades of their sculls flat on the floater, lift them out of the rullocks, and let them drift alongside. Each replaces them when the other has passed. In passing a boat, the rower who passes must take the outside, unless there is ample room within; and must also keep clear of the other's sculls or oars. If one boat is crossing the water, and another coming with the tide, the one coming with the tide must keep astern of the other, and have a good look out ahead. In landing, bring your boat in a slanting direction to the landing-place, whether going against or with the current, by which method her stern will sue round, and she will be partly broad-side on, with her stern towards the direction of the tide. When you step out of the boat, either use your oar or boat-hook to assist you, manship the sculls, as before directed, lay them in the boat, jump ashore with one end of the painter (or rope by which the boat

(is made fast) in your hand, and fasten it to the post or ring. *Sea rowing* is much more difficult than river rowing, and requires more strength and management. One of the most difficult things is launching a boat, in doing this from the sea-beach, when the weather is rough and there is a heavy surf, the two bowmen must get into the boat with their oars run out; and the other rowers follow the boat quickly in the descent; but they should not jump in till she is quite afloat, lest their weight might fix her on the beach, and she might ship a sea. In rowing, each man has in general a single oar, and sits on the opposite side of the galley from the rullock through which his oar passes. The oar must consequently cross the boat, and be held on its opposite side, so as to clear the back of the man before. The stroke must be longer in sea than in river rowing. The oar must be thrown out with a heave, caused by the simultaneous extension of the body and the arms. It is still more essential to feather in sea than in river rowing. The oar must be drawn back with great power, caused by the simultaneous contraction of the body and the arms; time with the rowers being accurately kept and distinctly marked. When the oars are delivered from the water, the time, until they go into it again, may be counted—one, two, three—when they pass through the water. The time is kept by the sternmost man of the rowers. In landing on a sea-beach, the rowers should always look ahead for a proper place, for there are great inequalities in apparently the smoothest beach, and landing in one place may be very good, while in another place, not twenty yards off, it may be dangerous. When a proper place is discovered, the rowers may give "good way" on shore. The bowman should be in the bows, with his boat-hook in one hand and the end of the painter in the other, and immediately the boat grounds, should jump out and haul in. The other portion of the crew should now jump out as quickly as possible, and assist him in pulling the boat up. Then everything should be stowed away safe and secure, and the boat left beyond the reach of the tide at high water. It will always be well to observe the following hints and cautions in rowing:—If you are rowing with others, always keep the stroke. If you are rowing a pair of oars or sculls by yourself, always put both oars into the water at the same time. Keep a good look-out ahead, that you may not fall foul of other craft. Do not put your oar too deep in the water, and mind that the blade of the oar is thoroughly covered. Look well to your thows, and see that they are not rotten before you place them in the holes. Let your boat-hook lie clear of your oars, and all clear of the painter. See that your foot-boards are properly latched to the ports of the boat made to receive them. In pushing off a boat from a ship or other craft, be careful not to stand on the seats of the boat, and not to overbalance yourself. Keep your boat neat, trim, and clean, and see that she is well baled out before entering her. Should you be rowing in a boat in

which there is a steersman, always be sure to obey orders. If you steer, always bear well forwards with each stroke, as it assists the rowers. Keep the rudder ropes as tight as bars, and move the rudder as little as possible.

RUDD is a bastard roach, supposed to be a cross between it and the bream; it is somewhat like the roach, with its tail more forked; its habits are much like those of the true roach, although its seasons are different, the warm months being those most favourable for its capture.

RUE.—A plant easily propagated by seeds, cuttings, or slips of the young shoots, in March, April, or May, planted in a shady border. It delights in a poor, dry, calcareous soil, in which it will continue for many years; and if cut down occasionally, always in full leaf and well furnished with young shoots. Letting it run to seed weakens the plant and shortens its longevity.

RUFFE.—This fish is like the perch in shape, and the gudgeon in colour, which it likewise resembles in size; it is a very delicious fish, but is to be found in but few of our rivers; it lies in shoals in quiet rivers where the water is deep, and is to be fished for with a small red worm, during the summer months, from May to August.

RUG.—An article of furniture, used to save the carpet near the fire; and likewise to afford greater warmth and softness to the feet at that place. They vary much in style and price, and should be chosen to suit the carpet in colour and degree of richness.

RUM.—An ardent spirit, obtained by distillation from the fermented skimmings of the sugar-boilers, the drainings of the sugar-pots and hogsheads, the washings of boilers and other vessels, together with sufficient cane juice or wort prepared by washing the crude cane, to impart the necessary flavour.

RUM JELLY.—Clarify and boil to a syrup, a pound of loaf-sugar; dissolve an ounce of isinglass in half a pint of water, strain it through a sieve into the syrup when it is half-warm, and when nearly cold, stir in a quart of white wine; mix it well, and add two tablespoonsfuls of old Jamaica rum, stir it for a few minutes, and pour it into a mould or glasses.

RUM SHRUB.—Take six gallons of rum, three pints of lemon-juice or orange-juice, three gallons of orange wine, three ounces of lemon-rind freshly peeled, and an ounce and a half of fresh orange-peel; both pared from the fruit as thinly as possible, and previously steeped for a few days in the rum; add ten pounds of loaf-sugar, and fill up the eask to thirteen gallons with water; stir them well together, and add more sugar, if not sweet enough; if too sweet, add more lemon-juice. Dissolve the sugar in the water used for making up the quantity required.

Rum, 6 gallons; lemon or orange juice, 3 pints; orange wine, 3 gallons; lemon peel, 3ozs.; orange-peel, 1½ oz.; sugar, 10lbs.; water, sufficient,

RUMP STEAK BROILED.—Have the steaks cut of an even thickness, but should they not be, divide the thicker from the thinner pieces, and give them time accordingly. Take care to have a very clear, brisk fire; throw a little salt on it; make the gridiron hot, and set it slanting, to prevent the fat from dropping into the fire, and making a smoke. It requires more practice and care than is generally supposed, to do steaks to a nicety; and for want of these little attentions, this very common dish, which everybody is supposed capable of dressing, seldom comes to table in perfection. It is usual to put a tablespoonful of ketchup, or a little minced shalot into a dish before the fire, while you are broiling; turn the steak with a pair of steak-tongs; it will be done in about ten or fifteen minutes; rub a bit of butter over it, and send it up garnished with pickles and finely scraped horse-radish.

RUMP STEAK PIE.—Cut three pounds of rump steak (that has been kept till tender) into pieces half as big as your hand, trim off all the skin, sinews, and every part which has not indisputable pretensions to be eaten, and beat them with a chopper. Chop, very fine, half a dozen shalots, and add them to half an ounce of pepper and salt mixed, strew some of the mixture at the bottom of the dish, then a layer of steaks, then some more of the mixture, and so on, till the dish is full; add half a gill of mushroom ketchup, and the same quantity of gravy or red wine; cover it as in the preceding receipt, and bake it two hours. Large oysters, parboiled, bearded, and laid alternately with the steaks, their liquor reduced, and substituted instead of the ketchup and wine, will be a variety.

RUMP STEAK, STEWED.—The steaks must be a little thicker than for broiling—let them be all of the same thickness, or some will be done too little and others too much. Put an ounce of butter into a stewpan, with two onions; when the butter is melted, lay in the rump steaks, let them stand over a slow fire for five minutes, then turn them and let the other side of them fry five minutes longer. Have ready boiled a pint of button onions; they will take from half an hour to an hour; put the liquor they were boiled in to the steaks; if there is not enough of it to cover them, add broth or boiling water to make up enough for that purpose, with a dozen corns of black pepper and a little salt, and let them simmer very gently for about an hour and a half, and then strain off as much of the liquor (about a pint and a half), as you think will make the sauce. Put two ounces of butter into a stewpan, when it is melted dust in as much flour as will make it into a stiff paste; some add thereto a tablespoonful of claret or port wine, the same of mushroom ketchup, half a teaspoonful of salt, and a quarter of a teaspoonful of ground black pepper; add the liquor by degrees, let it boil up for fifteen minutes, skim and strain it; serve up the steaks with the onion round the dish, and pour the gravy over.

RUMP STEAK, WITH ONION SAUCE.—Peel and slice two large onions, put them

into a quart stewpan with two spoonfuls of water; cover the pan close and set it on a slow fire till the water has boiled away, and the onions have got a little browned—then add half a pint of good broth, and boil the onions till they are tender; strain the broth from them, chop them very fine, and season it with mushroom ketchup, pepper, and salt; put the onion into it and let it boil gently for five minutes, pour it into the dish, and lay over it a broiled rump steak. If, instead of broth, you use good beef gravy, it will be the superlative.

RUNNING.—In order to perform this exercise well, the feet should not be raised too high from the ground; the knees are to be bent as little as possible, the upper part of the body is bent slightly forward, and the arms kept as closely as possible to the sides. Observing these directions, short distances should be essayed to be done in a given time. After some little practice, a person will soon become a good runner, without getting out of breath or feeling tired.

RUPTURE.—This term in surgery implies the act of breaking or bursting away of any parts of the contents of one of the great cavities, especially as regards those of the head and abdomen; the accident being known by the name of hernia. Hernia, or a rupture properly speaking, is a tumour formed by the protrusion of some part, and occasionally, of one entire viscus of the cavity beyond—as in the abdomen—of a portion or nearly the whole of the alimentary canal, and in the cranium of a part of one of the hemispheres or lobes of the brain. In the latter case, whether at birth, or the accident occurs subsequently, the severity of the case is certain to demand the early attention of a surgeon; consequently, rupture of the brain, as a very rare misfortune, may be passed over. Of the abdominal ruptures, as they are remarkably numerous, peculiarly liable to occur in both sexes, and may be produced in a moment, more definite explanation is necessary, and a more elaborate description demanded. The contents of the cavity called the belly, such as the liver, spleen, stomach, and bowels, are all invested, surrounded, and circumvoluted by a fine delicate membrane, like the pellicle lining an egg-shell; when from any cause, therefore, a rupture is produced, a portion of this membrane, as well as the fatty apron that hangs in front of the bowels, and called *omentum*, is carried forward into the tumour or swelling made by the mass of bowel distending the skin; so that if the tumour or swelling, known as a rupture, were dissected layer by layer, the organs would be found in the following order: cuticle, true skin, lining membrane of the abdomen, known as *peritoneum*, the caud or *omentum*, and lastly a greater or less portion of one or each part of the bowels. The parts of the body most liable to rupture are those where apertures are left in the anatomy of the part, or where the crevices between muscles afford an easier exit for the enclosed organs; as without a violent and unexampled force, it is impossible to drive

the bowels through the muscles themselves, which act as a wall to the abdomen. Such liable parts, however, are the *navel*, the *groin*, and the *upper front of the thigh*; females are most subject to the first and last; and men to the *inguinal or groin rupture*. The remote cause of rupture is not always the consequence of any imperfection of nature in leaving the part unprotected, but the immediate result of a certain and *suddenly-applied pressure*, forcing the bowels out, at a part insufficiently strong to resist the *vis a tergo*, or force from behind. Such causes are either lifting sudden and heavy weights, exerting great strength in pulling, or carrying heavy loads, or by running or leaping; besides these reasons in man, in the female must be enumerated the straining of child-birth. Ruptures are of two kinds, either *reducible*, or *non-reducible*, or *incarcerated*, than is, fixed and incapable of being returned by the hand and pressure. When the bowel escapes to form a rupture, it often splits the aperture through which it passes, making the reduction easy; at other times, only a very small portion, a mere bead of the intestine passes through, or, rather, is forced out, where, like a finger caught in the hinge of a door, it is compressed by the unyielding nature of the adjacent parts and *strangulated*; forming the second condition of *incarcerated rupture*. As this is a very dangerous form of the accident, inflammation, mortification, gangrene, rapidly supervene, and death in a few hours terminate the case. It is necessary that immediate steps should be taken to relieve the bowel of the constriction, and pass it into the abdomen; consequently, a knowledge of *how to act* in the absence of a surgeon, is of vital importance to every one likely to be placed in the way of such accidents.

Treatment of simple or reducible rupture.—The patient should be placed on the back, the legs parted, and bent, to relax the muscles; and the tumour grasped gently but firmly, by the fingers and thumb of the right hand. It is then to be drawn a little out, so as to stretch the bag of the swelling, and with the point of the forefinger guide and push little by little of the bowel upwards into the abdomen; the gurgling noise, and the facility of disappearance, guaranteeing the success of the operation. As soon as all has passed up, a compress, made of folds of linen cloths enclosing a penny-piece or square of lead should be laid on the opening, and the whole secured by a bandage firmly bound round the hips and thigh before the patient is allowed to sit up, and kept on till a properly fitted truss is adjusted, and in future worn. Sometimes, from the strength of the individual, and the nervous rigidity of the muscles, it is impossible to reduce the rupture; in that case the patient must be weakened, and the muscular tissue released, before the operation can be effected. In such cases, an emetic, or a nauseating dose of a grain of tartar emetic will produce all the objects aimed at, and ensure such bodily relaxation, that the same means repeated

in the same manner, will be crowned with success. Instead of the tartar emetic, a full dose of thirty or sixty drops of laudanum, or a hot bath, will effect the same results. In strangulated rupture, there is much pain in the part and over the whole abdomen, attended with great anxiety, sickness or retching, and fever, and when mortification has set in, the fatal symptom of hiccough. In such cases, if the hot bath, bleeding, or the exhibition of tartar emetic or opium fails in producing relaxation, or the ultimate reduction of the bowel, the only other remedy that will produce prostration, is the *injection of the smoke of tobacco*; should this fail, the surgeon can alone afford a chance of life, by cutting into the tumor, and with a peculiarly shaped knife, enlarging the internal aperture, and thereby permitting the imprisoned bowel to escape into the abdomen. In all cases of rupture, a *truss* scientifically made, and *properly applied*, should, except when in bed, be for ever after worn.

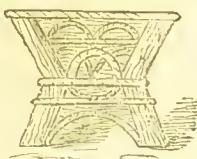
RUSHES.—An extensive genus of coarse plants, many of them aquatics, which are common on most wet lands. Rushes prefer a deep rich soil, and thrive best in land which is too cold and wet for other plants. The growth of these may be easily prevented by under-surface draining, which will prevent the stagnation of water on the soil, and by the application of saline or calcareous top-dressings, such as sand, lime, ashes, and road-scrapings. All the species of rush thrive best in a moist situation, some of them entirely in water, and others in a peat soil; they may be increased by seeds, or dividing the roots.

RUSKS.—Sift flour into a pan; cut up the butter in the milk, and warm them a little so as to soften the butter, but not to melt it entirely. Beat your egg; pour the milk and butter into the jar of flour, then the egg, then the rose-water and spice, and lustily the yeast. Stir all well together with a knife, spread some flour on a paste-board; lay the dough on it, and knead it well. Then divide it into small pieces of an equal size, and knead each piece into a little thick rusk. Butter an iron pan, lay the rusks in it, and set them in a warm place to rise. When they are quite light, bake them in a moderate oven. Rusks should be eaten fresh.

RUST, TO PREVENT.—Mix with fat oil varnish, four-fifths of well rectified spirits of turpentine. The varnish is to be applied by means of a sponge; and articles varnished in this manner will retain their metallic brilliancy, and never contract any spots of rust. It may be applied to copper, and to the preservation of philosophical instruments, which, by being brought into contact with water are liable to lose their splendour and become tarnished.

RUSTIC STRUCTURES.—These have a pleasing and picturesque appearance in gardens and pleasure grounds, and may be made to combine the useful with the ornamental. A specimen of rustic vase or basket is given in the accompanying engraving. The form is attained by construc-

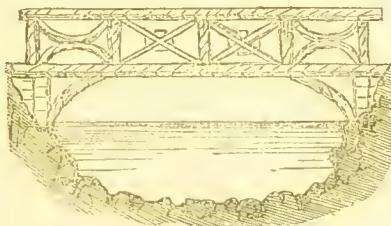
ting a box of durable timber, and elevating it on a pedestal formed also of plank. The pedestal and lower part of the basket are covered with thick rugged bark of oak or elm, or with thin slabs cut off trees of that description. The angles are covered with a beading of moss rope, as are also the bands round both pedestal and basket. The upper part is also covered with bark, and on it are nailed, at equal distances, rustic rods placed in a slightly diagonal direction. The top is cut in an undulated manner, of unequal lengths, and finished after the same fashion, only of a larger size, as the angles and bands are. The annexed figure is formed



of four kneed rustic pieces of wood, as near in size and form as can be procured.

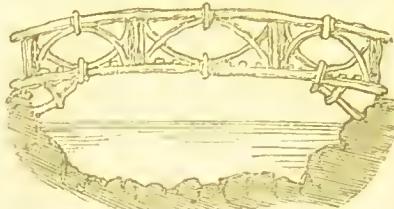
The panels between them are filled up with planking, the surface of which is covered with rods or

with rustic bark; and over that, with moss rope or rustic rods, and given any fantastic appearance the ingenuity of the designer can suggest. The top, for greater strength, may be capped with a rustic piece of timber of the same diameter as the main support, sawn through the middle, and neatly mitred at the corners. Rustic bridges associate well with garden scenery, and admit of great variety of form. The one shown in the subjoined illustration

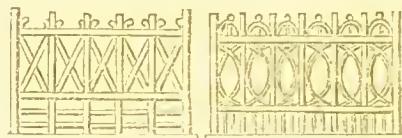


has stone abutments, upon which the principal timbers rest. They are adapted to cross rivulets, or spaces from ten to twenty feet in width. They are best constructed of from three to five feet in width, a breadth quite sufficient for foot passengers, for which purpose they are chiefly intended; but they can be so built as to carry carts or carriages, by laying from each abutment three six-inch Baltic battens, set on edge across, and tied together at the ends and middle with an iron bar, to keep them in their places. Over this a flooring of deal or oak is laid, rough from the saw, the upper surface of which is to be covered with a coat of asphalt, to form the footway, and to keep the flooring dry. The outer sides of the two outer battens are covered with larch bark, and the parapets or hand-rails are constructed of pieces of the same kind of tree, cut into the necessary lengths, and selected so as to be of as near the same thickness as possible. The middle of the footway should be rather higher than the

sides, to allow of the escape of rain water, which can be easily done by regulating the thickness of the asphalt accordingly. Another kind of bridge also looks very pretty when neatly executed. The footway is covered with larch poles laid across.



The supports beneath are let into the abutments, which are covered with rough stones and wild plants. Rustic fences may be frequently introduced into gardens, pleasure grounds, &c., with excellent effect; they may be formed of shoots of the oak, hazel,



or larch, and may be introduced, both as interior and surrounding barriers.—See FLOWER STAND, GARDEN SEAT, &c.

RYE BREAD.—Rye has been found to contain more gluten than any other grain except wheat, and, therefore, should be next to it as bread corn. The husk possesses an aromatic and slightly acidulous flavour, which renders it agreeable to the palate. The bran should not, therefore, be entirely separated from the flour; for if the grain be ground fine and divested entirely of the husk, the bread will be deprived of much of its pleasant taste. Rye bread is consequently made of coarse flour. A very excellent bread may also be made of a mixture of one-third rye, and two-thirds wheaten flour, which makes a sweeter bread than that made solely of wheat, and is preferred to any other by those who are in the habit of using it. The bread is very firm and solid, and retains its juiciness and moisture long, being also very nutritious.

RYE CAKES.—Beat two eggs very light, mix them gradually with a quart of lukewarm milk, and sufficient rye-meal to make a thick batter. Then stir in a teaspoonful of brewer's yeast; or twice that quantity if the yeast is home-made. Cover it, and set it to rise in a warm place. If too thin, add more rye-meal. When quite light, and covered on the surface with bubbles, bake it on a griddle. Butter the cakes and eat them warm at breakfast or tea.

RYE, CULTURE OF.—This species of grain is much more hardy, but incalculably less valuable in every respect than wheat. The

preparation and culture of rye, are, however, the same as for wheat; but the same quality of soil is not equally suited to the two kinds of grain. Rye grows most luxuriantly for feeding when sown on hazel mould, but any poor, dry, sandy soil is fit for its production. It is sown either broadcast or in drills, in the autumn or spring, but the spring variety is that most hardy, and most generally cultivated. The proportion of seed is from two to three bushels per acre when required for a crop, and three bushels and a half when it is intended to be fed off.

S.

SACK CREAM.—Boil together a pint of cream, the yolk of an egg well beaten, a glass of white wine, and a flavouring of lemon-peel. Stir the whole over a gentle fire till it be as thick as cream, and afterwards until it becomes cold. Then serve it in glasses with sippets of dry toast.

Cream. 1 pint; egg, yolk of 1; white wine, 1 wineglassful; lemon-peel, to flavour.

SACK DUMPLINGS.—Grate the crumb of two penny rolls, add to it three-quarters of a pound of suet cut small, three-quarters of a pound of currants washed clean, a nutmeg grated, a little sugar, the yolks of eight eggs, and a gill of white wine. Make the paste into dumplings of a moderate size, tie them in cloths and boil them for two hours. Serve with a sauce made of melted butter with white wine and sugar.

Bread, crumb of 2 rolls; suet, ½lb.; currants, ½lb.; nutmeg, 1; sugar, sufficient to sweeten; eggs, 8 yolks; white wine, 1 gill.

SACK MEAD.—To every gallon of water put four pounds of honey, and boil it for three-quarters of an hour, taking care to skim it. To every gallon add an ounce of hops; then boil it for half an hour, and let it stand till the next day. Put it into a cask, and to thirteen gallons of the liquor add a quart of brandy. Stop it lightly till the fermentation is over, and then bung it up close. A large cask should be suffered to stand a year before using.

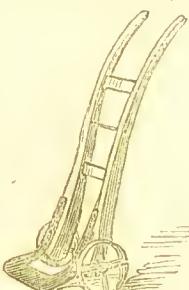
SACK POSSET.—This is made either of thin cream and grated sweet biscuits, or of beaten eggs and milk instead of cream. Boil the cream or milk, and season it with cinnamon and grated nutmeg. Warm the wine in a separate vessel, and stir it gradually into the milk; then pour it quickly from one vessel into another till perfectly smooth; this is especially requisite if made with eggs.

SACKS, MANAGEMENT OF.—The sacks for corn, &c., require to be attended to, to keep them in serviceable condition. They are usually made of a sort of canvas, called sacking, and according to the quality of the tow of which the sacking is made, and the mode in which it is manufactured, the price

of sacks varies. Every sackful of corn, before it is put into the cart, is tied at the mouth with a piece of cord, a soft cord answering the purpose best. Every sack should be marked with the initials of its owner's name, or with the name of the farm. The letters may be either painted on with a brush, or formed by painting upon open letters cut through a plate of zinc; in either case, red lead is used. When sacks become wetted with rain, they should be shaken and hung up in the air to dry; and if they get besmeared with mud, they should be washed and dried. If the air cannot dry them in time to prevent mouldiness, they should be dried before a fire. Where steam is used for threshing, sacks may be dried in the boiler-house. An airy place to keep sacks is across the granary, over ropes, suspended between the legs of the couples. Holes will break through sacks by usage or vermin. The best material for darning even canvas sacks is strong worsted; and if well darned, the mended portions become the strongest parts of the sack. When a considerable fracture occurs in a sack, the best plan is to cut it up for mending others. Sacks, when filled, are most conveniently wheeled from one place

to another in a barrow made for the purpose. A good form of sack-barrow is seen in the engraving. To be convenient it should stand upright of itself. There are two modes of using it; one when the sacks stand upright when filled, and the other when the sacks lean one against another.

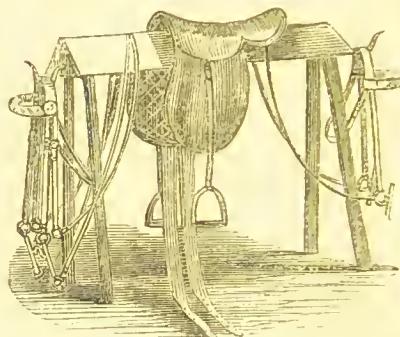
On standing behind the wheels, in the first case, and on taking hold of the handle, with the right hand, and the mouth of the sack with the left, and pushing it off, insert the iron scoop of the barrow between the sack and the floor; and on pulling the sack towards you, push the wheels forward by the right foot on the axle, and the sack is placed on the scoop ready for removal. In the other case push the scoop of the barrow below the sack which is lying a little from you; and in pulling the sack towards you it becomes ready for removal. The iron shields over the wheels save them rubbing against the sacks. The load is most easily wheeled with the barrow held in a nearly upright position. The more upright a man walks with a loaded sack on his back, with a short firm step, the less will the load oppress him. A filled sack is moved forward on the ground by placing both knees against the side of the sack, and, while embracing it with both arms, and grasping hold of it with both hands, lifting it from the ground and pushing it forward a space with the knees, and thus from space to space, or around a pivot. In regard to loading a cart with filled sacks, the general principle is to place all the mouths of the sacks within the body of the cart, so that



should any of the tyings give way, the corn will not be spilled upon the ground. One mode of loading a cart is, to lay two sacks flat on the bottom of the cart, with the mouths next the horse. Two are placed on the front with their bottoms outwards, and the mouths of all the four are within the cart. These last four sacks are placed on their edges, with the corners just over the edge of the front and back of the cart. Other two sacks are placed together on edge above these four, and one behind, flat, with all their mouths directed inwards. There are three modes of lifting a sack to a man's back. One is, for the person who is to carry the load to bow his head down in front of the sack, placing his back to its broad side, and bending his left arm behind his own back, across his loins, and his right hand upon his right knee to await in this position the assistance that is to be given him. Two persons assist in raising the sack, by standing face to face, one on each side of it, bowing down so as to clasp hands across the sack near its bottom, below the carrier's head, and thrusting the fingers of the other hands into the corners, which yield and go inwards and thereby afford a firm hold. Each lifter then presses his shoulder against the edge of the sack, and with a combined exertion upwards, which the carrier seconds by raising his body up, the bottom of the sack is lifted uppermost, and the tied mouth downmost, resting against the back of the carrier. The lifters now leaving hold, the carrier keeps the sack steady on his back, with his left arm across its mouth. Another plan is for the carrier to lay hold of the top of the shoulder of the sack with both his hands, his arms crossing each other. His two assistants do as directed before; and while they lift the sack between them, the carrier quickly turns his back round to the sack, and receives it there, retaining a firm hold of the parts he had at first. A third plan is for the assistants to raise the sack upon another, and then the carrier brings his back down against the side of the sack, laying hold of its shoulders with his own shoulders, and rising up straight with it on his back. The last plan requires more strength from the carrier, he having to rise up with the load; the second, most from the lifters, they having to lift the load up, and in the first, both parties are nearly equally concerned. To make sacks stand so as each may be taken away with ease from a number, they should be set, the first one in a corner, with one shoulder against one wall, and the other shoulder against the other wall, and every sack in the same row will stand with the left shoulder against the wall and the right shoulder against the side of the sack set down before it. In the succeeding row, the first sack will have its right shoulder against the wall, and its left shoulder against the side of the first sack that was set up in the corner; and the succeeding sacks will have their left shoulders in the hollows between the sacks in the first row, and their right shoulders against the sides of the sacks which were set down just before each of them, and so on row after row. When

filled sacks are wheeled aside, their mouths should be folded in and closed up. On tying sacks intended to be sent away by cart, the tie should be made as near the corn as possible, to keep the whole sack firm.

SADDLE. — This well-known horse equipment is made of pig-skin, strained and stretched over a wooden tree. The sides are made up by the flaps attached to the tree above; and lying on the flap is the stirrup-leather supporting the stirrup. Underneath the flap is a false and padded flap, on which lie the girths, which are buckled to leather straps fastened to the tree above. For keeping the saddle in proper form and order, it is a good plan to have a saddle tree, as seen in the annexed figure. There should be two pairs of girths



in use with the saddle, when the horse has much work to do, to allow one pair to be thoroughly cleaned and dried while the other pair is in use. The best way to clean girths is, first, to scrape off the mud with a knife, and then to wash them in cold water, and hang them up to a fire, or in the sun, to dry quickly. Warm water makes them shrink rapidly, and so does long exposure to wet. If there is time they should be washed the same day they have been soiled; and if not, on being scraped at night, they should be washed the following morning, and hung up in the air to dry, or if the air is damp, hang them before the fire. Girths allowed to dry with the mud on soon become rotten and unsafe. The stirrup-leathers should be taken off and sponged clean of the mud, and dried with a cloth; and the saddle-flaps should also be sponged clean of mud, and the seat sponged with a wrung sponge, and rubbed dry with a cloth. The stirrup-irons should be washed in water, and rubbed dry with a cloth immediately after being used. Fine sand and water on a thick woollen rag, cleans these irons well, and a dry rub afterwards with a cloth makes them bright.

SAFE. — In domestic economy, a receptacle for meat, whether cooked or raw, to defend it from flies and other insects, particularly where there is no regular larder. They are portable cupboards, generally of wood, with the panels of the doors and sides filled with

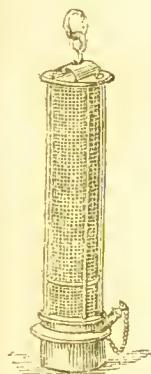
some perforated substance to let the air in properly, but so as to preclude the entrance of flies, &c. The most usual material for this purpose is what is called safe canvas. Iron wire is also employed, not being liable to be gnawed by mice and rats; but this requires to be kept well painted in oil, otherwise it will soon decay by rust. The common wire cloth is woven by a machine; a stronger wire is woven by hand, but is more expensive though more durable. Perforated zinc plates are likewise employed for this purpose; and safes made altogether of zinc are constructed for exportation to tropical climates, where the white ants frequently destroy those of wood. Safes are also used in commerce, and are necessary adjuncts to offices, &c., for keeping books, money, deeds, and other important documents. The manufacture of these receptacles has been brought to great perfection, and they are now so constructed, that the locks cannot be picked, nor can fire from without penetrate to the interior.

SAFETY LAMP.—The utensil invented by Sir H. Davy, bearing this name, consists of a common oil lamp, surmounted with a cylinder of wire gauze, the apertures

of which are not greater than one-hundredth of an inch square; and the wire of which it is made, of the one-fortieth or one-sixtieth of an inch in diameter. The fire-damp of coal mines in passing through the meshes of such gauze, gets cooled by the conducting power of the wire below the point necessary to kindle it. When this lamp is taken into an explosive atmosphere, although the fire-damp may burn within the cage with such energy as sometimes to heat the metallic tissue to dull redness, the flame is not communicated to

the mixture on the outside. The appearances are so remarkable, that the lamp becomes an admirable indicator of the state of the air in different parts of the mine, and if its admonitions are attended to, gives the miner time to withdraw before an explosion takes place.

SAFFRON.—The dried stigmata of a bulbous plant, the *crocus sativus*. It is chiefly employed as a colouring matter for cheese and butter. When good, saffron has a beautiful yellow colour and an agreeable odour, it yields its active principle, an essential oil, to spirit and water. As a medicinal agent it excites the nerves of the stomach, and is in some degree narcotic; its incantatory use has been sometimes attended with dangerous consequences. It is sometimes adulterated with safflower and marigolds; but the adulteration is easily detected, for the petals of these flowers will appear distinct from the stigmata of the



crocus. Some saffron is imported from



the Continent, but it is inferior to the English.

SAGE, CULTURE OF.—The sage is an evergreen shrub; the leaves of which are used in stuffings and sauces for many kinds of meats, &c., as well as to improve the flavour of various articles of cookery. All the varieties may be propagated by slips or cuttings of the young shoots taken from March to June; but most successfully in May and June, by detaching the young shoots of the same year. The outward shoots are to be preferred. Slip or cut them off, five or six inches long, stripping off the under leaves and preserving the top leaves entire; plant them in a shady border, six inches asunder, inserting them quite down to the top leaves, and water them. They will soon take root freely, especially the young shoots planted in May or June. In the advancing growth, if they spindle up in flower-stalks, pinch or cut that part down, that the plants may shoot out full and stocky from the bottom in close bushy growth for use the same year. In gathering sage for use, cut or slip off the young side and top shoots neatly; and be careful not to strike too close; especially towards winter, and during the season. In July and the rest of the summer it is usual to gather some of the young top growth to dry for winter. Keep the plants in regular bushy heads by cutting away disorderly growth, and the decayed flower-stalks in autumn. Keep them clear from weeds, and sometimes loosen the earth between and about the plants with a hoe, garden-trowel, or small spade in spring and autumn. Make a fresh plantation once in two, three, or four years; as may be necessary by the plants becoming nattered, stubby, and dwindling.

SAGE-AND-ONION SAUCE.—Chop very fine an ounce of onion and half an ounce of green sage leaves, put them into a stewpan with four spoonfuls of water, simmer gently for ten minutes, then put in a teaspoonful of pepper and salt, and one ounce of fine bread crumbs; mix well together; then pour to it a quarter of a pint of

broth, or gravy, or melted butter, stir well together and simmer it a few minutes longer. This is a very relishing sauce for roast pork, poultry, geese or ducks, or green peas.

SAGE CHEESE.—Bruise the tops of young red sage in a mortar with some leaves of spinach, and express the juice; mix it with the rennet in the milk, more or less, according to the preferred colour and taste. When the curd is come, break it gently, and put it in with the skimmer till it is pressed two inches above the vat. Press it eight or ten hours. Salt it, and turn every day.

SAGE GARGLE.—Boil quickly in a pint of water a large handful of sage leaves; cover the pan closely, and when reduced to one-half, strain it; when cold, mix it with the same quantity of port wine and vinegar; sweeten it with honey or with brown sugar. The decoction of sage may be used alone as a'gargle, or with vinegar and honey without the port wine; or gargle with vinegar and water.

SAGO BREAD.—The following is said to be a good and economical plan:—Two pounds of sago are to be boiled in three quarts of water to one quart, which is then to be mixed with a pint of yeast; and together they are to be poured into twenty-eight pounds of flour, and made into bread in the usual way. Sago is not more nourishing than rice or potatoes, nor does it produce a greater quantity of bread.

SAGO GRUEL.—Wash a tablespoonful of the best clear pearl sago, allow it to soak in a pint of water by the side of the fire for two hours, then boil for eighteen minutes, stirring it well in order to prevent its burning; sugar, lemon-juice, and nutmeg, or ginger may be added as required.

SAGO MILK.—Soak one ounce of sago in cold water for an hour, pour off this water and add a pint and a half of milk; boil slowly until the sago is well incorporated with the milk: sugar and nutmeg may be added as required. These sago drinks are nutritious, light, easily digested, and are peculiarly adapted for persons whose stomachs are in an irritable state, as no substance is more bland and soothing.

SAGO PUDDING.—Put three ounces of sago to soak in cold water for half an hour, then pour off the water and stir the sago by degrees into a pint of milk boiling hot in a saucepan; let it boil five minutes, stir it till quite cool. Beat an egg well, mix it with a little cold milk, one ounce of sugar, and a little grated lemon-peel; mix all well together, and bake in a slow oven an hour and a quarter.

 **Sago.** 3ozs.; milk, 1 pint; egg, 1; sugar, 1 oz.; grated leinou-peel, to flavour.

SAGO SOUP.—Wash in several waters, and float off the dirt from six ounces of fine pearl sago; put it into three quarts of good cold gravy-stock; let it stew gently from half to three-quarters of an hour, and stir it occasionally that it may not burn nor stick to the stewpan. A quarter of an ounce more of sago to each pint of liquid, will thicken it to the consistence of pea-

soup. It may be flavoured with half a wine-glassful of Harvey-sauce, as much cayenne as it may need, the juice of half a lemon, an ounce of sugar, and two glasses of sherry; or these may be omitted, and good beef-broth may be substituted for the gravy-soup for a simple family dinner, or for an invalid; or, again, it may be converted into inexpensive white soup by the addition of some cream smoothly mixed with a dessert-spoonful of arrow-root, or thick cream and new milk in equal portions. Veal broth would be the most appropriate for this, or it might be made with half veal and half mutton.

 **Sago.** 3ozs.; soup, 3 quarts.

SAINFOIN.—A deep-rooted perennial, native of Britaln, and much cultivated for green food, more particularly on sandy, chalky, and calcareous soils generally. On rocky soils, however, it flourishes most, its roots penetrating into crevices and fissures to an extraordinary depth. Wet clays are

utterly unsuited to it; down-lands and calcareous sands are the best. It is sown in the manure as clovers and grasses with a crop. In the following season it is mown for hay or for green food. It attains maturity in the third year. Sainfoin is usually mixed with white clover, but may be cultivated in drills. When sown broadcast, from



three to five bushels may be sown; if drilled, half the quantity is sufficient. The time of sowing is usually from the middle of February to the end of March. Sainfoin is often used as a substitute for red clover, as it will grow well in soils not adapted for that plant. It is a productive crop, and yields well. If made into hay, care should be taken not to let it stand long, but cut it as soon as the flower is fairly formed, and make it as quickly as possible, which may be done so soon as its liability to heat ceases.

SALAD DRESSING.—Best white-wine vinegar, one pint; best olive oil, half a pint; vinegar of garlic, onion, or shallot, two large tablespoonfuls; horse-radish vinegar, a large tablespoonful; fresh butter, three ounces; loaf-sugar powdered, two ounces; flour of mustard, two ounces; cayenne pepper, fifteen grains; the yolk of twelve hard-boiled eggs; salt, three ounces. Method of preparing:—Boil the eggs from ten to twelve minutes, and immediately plunge them in cold water. When perfectly cold, remove the shells and the whites, and rub the yolks, or beat them in a marble mortar for at least ten minutes; next, work together with the hands the butter and loaf sugar until they form a perfect cream. If the weather is cold, they may be just melted

over the fire, but great care is requisite to keep the vessel shaken one way, and not leave it over the fire a moment longer than the butter is melted, otherwise it will be apt to oil or curdle. It falling over the fire can be avoided it is much better. The salt, mustard, and cayenne to be well rubbed together. The flavouring vinegar to be mixed with the other viuegar, and the butter and sugar to be rubbed with the yolks of eggs till the whole is blended in a perfectly smooth paste. Next add the oil, and rub till the whole is well incorporated, then the salt, and other powders, and finally the vinegar. When well mixed, put it into bottles that are perfectly clean and dry, cork very closely, cover the corks and tops of the bottles with bottle-cement, and keep in a dry and cool place. It is better to have small bottles than large ones, as frequent opening of a bottle is to be avoided.

SALAD TO MIX.—This is a point of proficency which it is easy to attain with care. The main point is to incorporate the several articles required for the sauce, and to serve up at table as fresh as possible. The herbs should be morning-gathered, and they will be much refreshed by laying an hour or two in sprig water. Careful picking, and washing, and drying in a cloth, in proportion of each herb, requires attention. The sauce may be thus prepared:—Boil two eggs for ten or twelve minutes, and then put them in cold water for a few minutes, so that the yolks may become quite cold and hard. Rub them through a coarse sieve with a wooden spoon, and mix them with a tablespoonful of water or cream, and then add two tablespoonfuls of fine flask oil or melted butter; mix, and add by degrees, a teaspoonful of salt and the same quantity of mustard; mix till smooth, then incorporate with the other ingredients about three tablespoonfuls of vinegar; then pour this sauce down the side of the salad-bowl, but do not stir up the salad till wanted to be eaten. Garnish the top of the salad with the white of the eggs cut in slices; or these may be arranged in such a manner as to be ornamental on the table. Some persons may fancy they are able to prepare a salad without previous instruction, but, like everything else, a little knowledge, in this case, may not be thrown away.

SALAD VINEGAR.—Take of Tarragon-savory, chives, eschalots, three ounces each; a handful of the tops of mint and balm, all dry and pounded; put into a wide-mouthed bottle with a gallon of the best vinegar; cork it closely, and set it in the sun, and in a fortnight strain off, and squeeze the herbs; let it stand a day or two to settle, and then strain it through a filtering bag.

SAL-AMMONIAC.—This is employed in fomentations, and as a lotion in mania, plethora, apoplexy, violent headaches, indolent inflammations, chilblains and gargles. It disperses indolent humours when mixed with soap-plaster and applied over them. To form a lotion, add a piece the size of a walnut to half a pint of water, and dissolve; cloths dipped in it produce great coldness, and thereby reduce inflammation.

SAL-VOLATILE.—This is an excellent stimulant, and frequently employed in langnors, faintings, hysteria, flatulent colic, and nervous debility, in doses of from half a teaspoonful to two teaspoonsfuls; it may be given with the same quantity of spirit of lavender in a wineglass of water, which increases its beneficial effect.

SALE OR RETURN.—When goods are sold upon *sale or return*, no absolute property is vested in the conditional vendor; and the sale of them contrary to the price or terms agreed upon subjects him to an action. But though while the goods remain unsold in the hands of such conditional vendor, no absolute property rests in him, yet, in the event of bankruptcy, they would doubtless pass to the assignees as goods in his possession, order, or disposal; nor would any agreement between the parties protect the goods from the operation of the statute.

SALEP.—A preparation from the bulbs of the orchis *mascula*. It is imported chiefly from the Levant, but some of it is brought from India. It consists of peculiar kind of gunus, termed bassorin and feula. It is more nutritious than arrowroot or sago, and consequently is better adapted for the convalescent than the siek. It is prepared by dissolving the pounded salep in hot water with assiduous stirring, and adding to the solution sugar and milk.

SALINE DRAGHT.—Dissolve a seruple of salt of tartar in a tablespoonful of lemon-juice and three tablespoonfuls of water; sweeten with lump-sugar, and drink while it effervesces. This is an excellent remedy for sore throats and nausea.

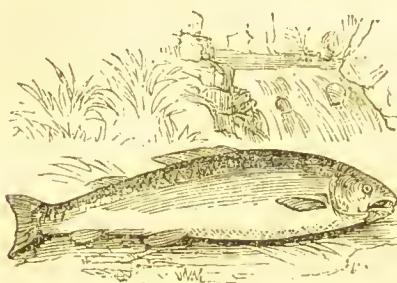
SALLY LUNNS.—Take two pounds of fine flour, two dessert spoonfuls of yeast, with a little warm water; this must be put to rise for half an hour. Put two ounces of butter and the yolk of an egg in as much new milk as will make it a proper stiffness; mix all well up, and put it into cups; when risen, bake them in rather a quick oven.

Flour, 2 lbs.; yeast, 2 dessert spoonfuls; butter, 2 ozs.; egg, yolk of 1; milk and water, sufficient.

SALMAGUNDL.—A preparation used as side dish, and a very inviting one if of delicate shape and varied colours. For this purpose, chop separately the white part of a cold chicken, or of veal, the yolks of four or five eggs, and the same number of whites of eggs; a large handful of parsley, six anchovies, some beet-root, pickled red cabbage, ham, and grated tongue, or anything well flavoured and of a good colour. Put a saucer or basin into a round dish, or a smaller dish into a long one, then make rows round it, wide at the bottom, and growing smaller towards the top: making choice of such of the ingredients for each row as will most vary the colour; put butter at the top, worked into any desired shape, and a little sprig of curled parsley may also be stuck in. Nothing need be put into the dish, as the salmagundi may be laid in rows, or put into the half whites of eggs, which may be made to stand upright by cutting off a small piece at the round end. In the latter case, each half egg has but one

ingredient. Curled butter and parsley may be put us a garnish between.

SALMON.—Salmon fishing is one of the most difficult and delicate branches in the art of angling. It requires a dexterous hand and an acute eye to raise and stroke this fish, and when this is achieved, the sport may be said to be only begun. The salmon is chiefly to be found in large rapid rivers, especially in such as have pebbly, gravelly, and sometimes weedy bottoms. When feeding, this fish generally prefers the rough and upper parts of gentle streams, and the tails of large ones; when gorged they retire to the deep, broad water. When



in motion they swim very fast, usually in the middle of the river, and near the ground. They also move more at night than in the day, halting at convenient places, under bushes, weeds, banks, rocky projections, or stones. The salmon bites best from six till eleven in the forenoon, and from three in the afternoon until sunset, especially when there is a moderate breeze upon the water. The chief months to angle for them are March, April, May, and June, though they will take a fly until October, but they are then out of season; and if tried for let it be with lob-worms and minnows. Worm fishing for salmon should be practised with a long and firm rod, of seventeen or eighteen feet in length, according to circumstances. A full-sized multiplying reel, or otherwise a large single one, should be adapted to the rod, sufficient to contain at least forty yards of the best silk and hair line, twisted very stout, looped to a foot length of gut, with a hook link of double, or of the very strongest single salmon gut, which will in all general cases be found sufficient. Fishing with lob-worms for salmon is often practised by means of a leger-line. Use a No. 1, 2, or 3 hook, run it through the middle of a lob-worm well secured, and pull it above the shank; then take a second, and put the hook in an inch below the tail, drawing it on the hook about three-fourths of the length, the end of the worm being at its point; then draw down the first to the latter worm. Drop this bait into any likely situation, and the current will give motion to it by means of the loose portion of line below the head; and when it has remained a few minutes without a bite, gently move it a little up the stream, and again let the plumb rest at the bottom. Drop it also in strong eddies, and

at the declivities leading into deep pools, and particularly on the edges of the rocky precipices under the water. These will be found killing methods to play lob-worms and they are seldom so shown but that they are taken, if salmon are present and on the feed. The time when the water is too much discoloured for fly-fishing, is that in which angling with the worm is peculiarly adapted to the taking of large salmon. If the colouring be considerable, and the water much agitated, use lob-worms; but should the water be moderately coloured only, the largest of the other varieties, as brandlings and marsh-worms sometimes kill best; when there is wind while the water is clearing, almost any worm will be readily taken. In very bright weather, and bright water also, small worms, well shown on a fine hook, as No. 4 or 5, will often attract when flies of all kinds fail. It is necessary in all these practices to observe, that the salmon requires the utmost caution in approaching his haunts; to ensure success, the angler should, if possible, be absolutely hidden: the shadow of even the rod and line ought not to fall on the water; but all ought to be still and quiet around, to lull into security this watchful fish. Except in very gloomy blustering weather, to ensure sport, begin your fishing as early as possible after daylight, and continue it in the evening as late as any light remains. In bright nights it is not unusual to fish all night long, with the lob-worm both above and below, that is, on the top and in the depths. If much dew is falling, salmon will not bite. When the salmon takes the bait, the line is felt to be lighter; and sometimes a sudden pull is experienced; in the former instance, give the fish time to gorge, and then strike pretty sharp, but not violently; in the latter case, it is probable the fish has hooked himself, and you should strike more moderately; but in most instances, keep a light line. Salmon generally take the worm gently within their lips, as it were, and then swim away to gorge it. While they are moving you must not check them, but give them line, until a sudden tightening of it tells you the bait has been gorged. Then strike gently, and play your fish boldly, according to the strength of your tackle. The landing of salmon is usually accomplished by means of a gaff-hook. If one be not at hand, draw the fish on a bank, and by putting a finger into the gills draw it out. The capricious appetite of salmon will occasionally render it necessary for the angler to try various other baits; all the larvae are taken by them; but more frequently the fresh-water snails of every variety are found eating. The mussel, limpet, cockle shrimp, &c., are often used, and it may be almost said, that there is no bait whatever taken by any other fish which salmon will not likewise be lured by; and therefore it is prudent, when the angler is satisfied that there are salmon in the water before him, to vary his bait to suit their tastes. The marine testaceous baits are found to answer best in or near tideways, in which situations they will also take the sea-worm, called the lugworm, sometimes better

than the earth-worms; and it is observed that salmon are more ready to do so when the tide is rising than when it is falling: it is particularly so with regard to shrimps, which they will occasionally seize, when drawn up on the top of the water, with great eagerness. With a rising tide, insects are stirred up, and small fish forced forward by the current, which the fish are then on the look-out for and ready to receive. Fish baits, used either for trolling or spinning, are also very tempting to salmon. Salmon will likewise readily take gudgeons, either by spinning or on a gorge-hook. When spun, take off a breast fin of one side, and a vent fin of the other. The method of trolling with the various baits does not differ from that employed with fish baits on the gorge-hook generally. The practice proves a very convenient one from the sides of wide rivers, or whenever the salmon-haunts can be approached sufficiently near to spin a bait; for the gorge-lead will allow it to be cast to a considerable distance. This proves a good method also in waters of extreme depth, as in locks, &c.; and then a trolled bait likewise often shows better from a boat than a spinning bait. The spinning bait is, however one of the most killing methods among all those employed by the angler in the capture of salmon. Thus there appear few baits more successful than a full-grown minnow when it is well spun; but when the water is much coloured, a bleak, if it can be procured, is preferable. The methods employed and the tackle used are exactly the same as employed in similar fishing for trout, except that every part of the apparatus should be stronger. As a general bait, minnows are to be preferred; the largest salmon seldom refusing a minnow if well shown; neither is it too large for the smallest fish. Under this view of the subject, with small baits and fine tackle, both large and small fish may be captured by them; but as regards the tackle, this must be received with limitation. In some of the Scotch and Irish lakes, where a fish of twenty or twenty-five pounds may be hooked, it would be most unwise not to be prepared accordingly: here a common pillar which only should be employed, with sixty or eighty yards of powerful line, and armed with strong hooks firmly whipped to gimp instead of gut. In very wide rivers, and in lakes or lochs, a boat is of great assistance in salmon fishing, and in many situations it is indispensable. From a boat either anchored, rowed, or gently drifting, by trolling with salmon-ry and small trout, very large fish are taken.

SALMON BAKED.—Take a piece of salmon and cut it in slices an inch thick; make a forcemeat, as follows:—Take some of the flesh of the salmon, and the same quantity of the meat of an eel, with a few mushrooms; season it with pepper, salt, nutmeg, and cloves; beat it all together till it is very fine; boil the crumb of a penny roll in milk, beat with it four eggs till it is thick, let it cool, and mix it all together with four raw eggs; take the skin from the salmon, and lay the slices in a dish; cover every slice

with the forcemeat, pour some melted butter over them, and add a few crumbs of bread; lay the crust round the dish, and stick oysters round it; put it into an oven, and when it is of a fine brown, pour over it a little melted butter, with some port wine boiled in it, and the juice of a lemon.

SALMON BOILED.—Clean it carefully, boil it gently, putting it in cold water, and take it out of the water as soon as done. Let the wafer be boiling, if the fish is crimped or split in slices. If under-done it is very unwholesome. Serve with shrimp or anchovy sauce. Salmon takes nearly as long as meat, and for a large fish a quarter of an hour per pound will not be too much to allow.

SALMON BROILED.—Take some slices cut from a fine salmon, wipe them clean and dry; melt some butter smooth and fine, with a little flour and salt, put the pieces of salmon into it, and roll them about that the butter may cover them all over; then lay them on a nice clean gridiron, and broil them over a clear but very slow fire; while the salmon is broiling make sauce with a couple of anchovies washed, boned, and cut into small pieces, a leek cut into three or four long pieces; set on a saucepan with some butter and a little flour, put in the ingredients, with some capers cut small, some pepper and salt, and a little nutmeg; add to them some warm water, and two spoonfuls of vinegar; shake the saucepan till it boils, and the sauce is done; when the salmon is on one side, turn it on the other till it is quite done; take the leek out of the sauce, pour it into a dish and lay the broiled salmon upon it.

SALMON COLLARED.—Split such a part of the fish as may be sufficient to make a handsome roll, wash and wipe it, and having mixed salt, white pepper, pounded mace, and Jamaica pepper, in quantity to season it very high, rub it inside and out well. Then roll it tight, and tie it up with broad tape; put as much water and one-third of vinegar as will cover it, with bay-leaves, salt, and both sorts of pepper. Cover close, and simmer till done enough. Drain and boil the liquor quickly, and put on; when cold, serve with fennel. It is an elegant dish, and extremely palatable.

SALMON CURRIED.—Broil slightly as above, then mix half an ounce of curry-powder to each pound of fish, with a good gravy or stock; stew gently in this for half an hour, and serve with rice as usual.

SALMON CUTLETS.—Cut them from a piece of a split salmon without bone, about half an inch thick, and rub them over with egg well beaten; season with pepper and salt; dip them in chopped herbs and bread crumbs; fry them as you would a veal cutlet; serve with India pickle sauce, cut pieces half an inch thick, season them, put them in paper, and broil until hot through; serve with lemon only. This is usually eaten at breakfast. Slice the salmon, and cover it with salt for two hours; then dry it, and brush it over with yolk of eggs. Fry it in oil, and serve it cold with salad.

Any small pieces of salmon may be served with salad or with salad sauce.

SALMON DRIED.—Rub your fish with common salt, and hang it to drain twelve hours, if a large fish. Take two ounces of saltpetre, one ounce of bay salt, and two ounces of coarse sugar. Mix them well together, and rub your fish with it; let it lie twenty-four hours, then put a stick across it, and hang it up to dry. If a small fish, twelve hours will salt it. The head is taken off, and the fish split open to the skin of the back. Cut the fish in slices; wrap it in paper, butter, and broil it.

SALMON IN CASES.—Take a piece of salmon, cut it into small cutlets, season them with pepper, salt, and nutmeg; take as many half sheets of paper as cutlets, and put a piece of cutlet in each fold of the paper, that nothing can run out; pour a little melted butter over the papers, and then strew some crumbs of bread over the butter, put them in a tin oven, before the fire, but take care the papers do not burn; when they are done enough, serve as they are, without sauce.

SALMON, KIPPERED.—Cut the fish down, take out the inside and roe. Rub the whole with common salt, after scaling it; let it hang twenty-four hours to drain. Pound three or four ounces of saltpetre, according to the size of the fish, two ounces of bay salt, and two ounces of coarse sugar; rub these, when mixed well, into the salmon, and lay it on a large dish or trays two days; then rub it well with common salt, and in twenty-four hours more it will be fit to dry; wipe it well after draining. Hang it either in a wood chimney or in an airy place, keeping it open with two small sticks; or rub with brown pyroligneous acid. Kippered salmon is eaten broiled in paper, and only just warm through, with egg sauce, and mashed potatoes; or it may be boiled, especially the part near the head.

SALMON, PICKLED.—Take a whole fish, bone it, and cut it in pieces (good-sized, square ones); place them in a jar with split allspice and whole pepper; then tie a bladder on the top, to prevent any water getting in; put it into a saucépan of boiling water, let it keep so for two hours; then take it out, and when quite cold, add as much cold vinegar as there is liquor, and the salmon will be delicious.

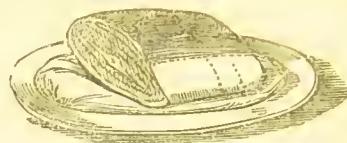
SALMON PIE.—Boil salmon as for eating, remove the skin and take all the bones out, and pound the meat very fine in a mortar, with mace, nutmeg, and pepper and salt to your taste; raise the pie, and put flowers or leaves on the sides; put the salmon in and cover it, bake it an hour and a half; when it comes out of the oven, take off the cover, and put in four ounces of rich melted butter; cut a lemon in slices, and lay over it; stick in two or three leaves of fennel, and send it to table without a cover.

SALMON PUDDING.—Pound or chop well and rub through a sieve one pound of cold boiled salmon freed entirely from bone and skin, and blend it lightly but thoroughly with half a pound of fine bread-crumbs, a

teaspoonful of essence of anchovies, a quarter of a pint of cream, a seasoning of fine salt and cayenne, and four well-whisked eggs. Press the mixture closely and evenly into a deep dish or mould buttered in every part, and bake it for one hour in a moderate oven.

C. Salmon, 1lb.; bread crumbs, $\frac{1}{2}$ lb.; essence of anchovies, 1 teaspoonful; cream, $\frac{1}{2}$ pint; eggs, 4; salt and cayenne to season.

SALMON, TO CARVE.—Give a portion of the back and belly to each person, or as desired. If a whole salmon is served, remember that the choice parts are next the head, the thin part is the next best, and the tail the least esteemed. Make an incision



along the back, and another from the front; cut the thickest part between for the lean; and hinder part for the fat. When the fish is very thick, do not help too near the bone, as the flavour and colour are not so good.

SALMON, TO CHOOSE.—When salmon is fresh, the flesh is of a fine red, but particularly so at the gills; the scales should be very bright, and the fish very stiff.

SALSIFY.—This vegetable, delicately fried in butter, which is a common mode of serving it abroad, forms a delicious second course dish; it is also good when plain-boiled, drained, and served in gravy, or even with melted butter. Wash the roots, scrape gently off the dark outside skin, and throw them into cold water as they are done, to prevent them turning black; cut them into lengths of three or four inches, and when all are ready put them into plenty of boiling water with a little salt, a small bit of butter, and a couple of spoonfuls of white vinegar, or the juice of a lemon; they will be done in from three-quarters of an hour to an hour. Try them with a fork, and when perfectly tender, drain, and serve them with white sauce, rich brown gravy, or melted butter, three-quarters of an hour to an hour.

SALT, PROPERTIES AND USES OF.—The use of salt as a condiment, or as an addition to food, is undoubtedly attended with beneficial effects. Its immediate office is to soften and dissolve the food, and this renders the process of digestion more perfect; it forms, moreover, one of the constituents of the blood, and of the body generally. If salt be denied, the digestion is weakened; the general tone and nourishment of the body are impaired, and worms are, in consequence, likely to be generated in the intestines. Salt, therefore, ought to be an addition to the food of all, and to children, especially, attention should be paid in this respect; and for their use, bay-salt will be found the most suitable, as it con-

tains all the mineral elements of sea-water, and is almost as efficacious when regularly used as sea-air. It is, however, a very different thing, to eat salt with food and to live upon fish or meat which has been salted. In the latter case, certain chemical effects are exerted upon the meat and its nutrient constituents, by the salt, which modify considerably the nutriment afforded to the body. Salt may almost be regarded as medicinal. In some cases of convalescence, in which the craving for it becomes intense, it should be allowed. It appears to act as a tonic. From one to two ounces of salt dissolved in half a pint of water, forms an excellent domestic emetic. It may, however, purge instead of causing vomiting. It is used in the form of a clyster to destroy worms. Externally, salt is used in solution, in which cases it seems to have a tonic effect; warm saline bathing is efficacious in rheumatism. For local bathing after injuries; such as sprains, &c., the salt water douche is well adapted to impart strength. For the above purposes, a pound of salt dissolved in three gallons of water is a good average strength. Salt is also a valuable addition to the food of the lower animals. The quality and quantity of milk from a cow is improved by giving to it in some malt, grains, or other food, about an ounce and a half of salt, an hour before milking. Horses are kept in health by giving about half an ounce of salt twice a day. It should also be given to sheep to the extent of from a quarter of an ounce to half an ounce in the course of twenty-four hours; and poultry is much improved when fattening, if a quarter of an ounce of salt be added to every pound weight of their food. Salt also acts as a manure. The properties of salt chiefly useful in agriculture, are the supply of its constituents, soda and chlorine; attraction for moisture and resistance of freezing; sharpness, without acid or alkaline; solubility and penetration of porous matters; promotion of putrefaction when used sparingly, though the contrary when used freely; mutual decomposition with lime and some of its compounds, as well as some other salts, giving rise to other and often more active fertilisers. The benefits resulting to the farmer from the use of salt are as follows:—In the soil—retention of moisture and softness; general penetration and digestion of all the materials of vegetable food to enrich the root-sap; and destruction of vermin and of seeds when used freely. On other manures, the destruction of all vermin, weeds, roots, and seeds; the digestive action just described; mutual decomposition with lime and its compounds, to the advantage of both; and an improvement in the efficacy of ammonical manures, whilst it greatly reduces their cost. In the plant, improvements in the taste, wholesomeness, and nutritive powers, and earlier maturity.

SALT, TO PREPARE FOR TABLE.—Take a lump of salt of the size you think proper, and if not quite dry, place it in a plate before the fire to make it so, then pound it in a mortar till it is perfectly fine; this

done, fill your salt-cellars with it higher than the brim, and with the flat side of a knife that has a smooth edge, take it off and press it down even with the top. If the salt-cellars are not smooth on the top, cut it in notches; a tablespoon is the best tool to press and smooth the salt in them—or it makes them look very neat, if the bottom of the salt-cellar is ornamented; and place the bottom of one on the top of the other for the same purpose. The salt should be in a lump, that it may be free from dirt, and the knife must have a smooth edge.

SALT FISH BOILED.—When very salt and dry, this must be long soaked before it is boiled, but it is generally supplied by the fishmongers nearly or quite ready to dress. When it is not so, lay it for a night into a large quantity of cold water, then let it be exposed to the air for some time, then again put it into water, and continue this until it is well softened. Brush it very clean, wash it thoroughly, and put it with abundance of cold water into the fish-kettle; place it near the fire, and let it heat very slowly indeed. Keep it just on the point of simmering, without allowing it ever to boil (which would render it hard) from three-quarters of an hour to a full hour, according to its weight; should it be quite small and thin, less time will be sufficient for it; but by following these directions, the fish will be almost as good as if it were fresh. The scum should be cleared off with great care from the beginning. Egg sauce and boiled parsnips are the usual accompaniment to salt fish, which should be dished upon a hot napkin, which is sometimes thickly strewed with chopped eggs.

SALT FISH PIE.—Boil a side of salt fish in the ordinary manner; cut a square piece out of the middle, about the size of the palm of the hand; take the skin off the other part, and remove all the bones; mince the fish very small with six eggs, boiled hard; season it with pepper, nutmeg, and pounded rice; then slice the crumb of French rolls into a pan, pour over it a quart of boiling milk, and let it stand to soak; in the mean time, make a good puff paste, and cover the dish all over; have in readiness, two spoonfuls of parsley shred very fine, beat the bread well together, then put in the fish and eggs, and chopped parsley; stir all well together; melt about three-quarters of a pound of butter, stir it into the ingredients, with a little lemon-juice; pour this into the dish, lay the square piece of fish in the middle; cover it over, and bake it for an hour or a little more.

SALT FISH, WITH CREAM.—Take and boil some salt fish till about three parts done. Divide it into flakes, put them into a saucepan with some cream, a little pepper, and a handful of parsley scalded and chopped. Stew it gently till tender, thicken the sauce with two or three yolks of eggs, and serve hot.

SALTING MEAT.—In the summer season, especially, meat is frequently spoiled by the cook forgetting to take out the kernels; one in the udder of a round of beef, in the fat in the middle of the round, those

about the thick end of the flank. If these are not taken out, the meat will not keep. The art of salting meat is to rub in the salt thoroughly and evenly into every part, and to fill all the holes full of salt where the kernels were taken out, and where the butcher's skewers were. A round of beef weighing twenty-five pounds will take a pound and a half of salt to be rubbed in all at first, and requires to be turned and rubbed every day with the brine; it will be ready for dressing in four days, if you do not wish it very salt. In summer, the sooner meat is salted after it is killed the better, and care must be taken to defend it from flies. In winter, it will eat the shorter and tenderer, if kept a few days (according to the temperature of the weather) until its fibre has become short and tender, as these changes do not take place after it has been acted upon by the salt. In frosty weather, take care the meat is not frozen, and warm the salt in a frying-pan. The extremes of heat and cold are equally unfavourable for the process of salting—in the former the meat changes before the salt can affect it—in the latter it is so hardened, and its juices are so congealed, that the salt cannot penetrate it. If you wish it red, rub it first with saltpetre, in the proportion of half an ounce, and the like quantity of moist sugar, to a pound of common salt. You may impregnate meat with a very agreeable vegetable flavour, by pounding some sweet herbs and an onion with the salt; you make it still more relishing by adding a little zest or savoury spice.

SALT.—This medicine, commonly known as Epsom salts, consists of a compound of magnesia and sulphuric acid—sulphate of magnesia—and derive their names from having been first obtained by the evaporation of the water of a spring situated near Epsom, in Surrey, which contains the salt in large quantity. They are now prepared largely from magnesian limestone, and also from sea-water. Epsom salts are tolerably certain in their action, and do not gripe much; on these accounts the medicine is a most valuable one in many diseases, particularly in persons of a full habit; but, as generally employed, it is not suitable for a common or frequently repeated aperient. From its being in many instances taken in a state of too concentrated solution, it acts in a peculiar manner on the blood, so as to produce serious debilitating effects: moreover, after the action of a dose of Epsom salts, the bowels in those liable to habitual constipation, are very apt to be left with a greater tendency to inaction than before; nevertheless, in persons of full strong habit, an occasional dose of the medicine is, without question, beneficial; but it should be taken in smaller quantity, and much more largely diluted than is usually done. The question of dilution is a very important one in the administration of salts, and if attended to, renders it safe and efficient even for the comparatively delicate. From half a drachm, or even less, to a drachm, should be dissolved in six ounces or half a pint of cold or tepid water, and taken on first rising

in the morning, when the dose should be followed by a fluid breakfast: many persons liable to constipation find this method a simple and effectual remedy, which may be used for weeks together. From five to ten drops of dilute sulphuric acid are often a good addition to the dose, and one which at the same time corrects in some degree the bitterness of the salt. If there is debility, either of the stomach, or generally, from a quarter to half a grain of quinine, or of some salt of iron, may be added. The quinine appears to increase the aperient power. The most convenient method of taking Epsom salts in this form is to dissolve one ounce in a pint of water, adding the acid or other ingredients in proper proportion. Of the solution, from half to a whole wineglassful may be taken the first thing in the morning, diluted with the proper quantity of water before taking it; or, if preferred, by the latter being drunk immediately after the medicine. The following method for the administration of Epsom salts is also recommended:—Take of water about one pint, powder of roasted coffee two and a half drachms, Epsom salts, one ounce; boil well for two minutes—not in a tinned vessel—remove from the fire, and let the mixture infuse for some minutes, so as to allow time for the development of the aroma; then filter, or merely strain off; it must be sweetened to taste. This fluid does not impart the slightest bitterness of taste to the salt. It should be observed, that the simple infusion of coffee is not capable of removing the bitter taste. The combination of Epsom salts with infusion of senna, constituting the common black draught, is one of the best forms of active occasional purgative in common use. It is well to bear in mind, that there is considerable resemblance between oxalic acid in its crystalline commercial form and Epsom salts, and that in consequence, fatal mistakes have occurred. The intensely acid taste of a single crystal of the former, would at once clear up any doubt; perhaps it might be well always to use so simple a test.

SAMPHIRE, CULTURE OF.—This plant is not easy of culture; it would appear to succeed best in a rich light soil, loamy sand and gravel mixed with it. It must be in a well sheltered situation, and requires to be freely watered in dry weather, till the roots have struck deep among the soil. If a few plants can be induced to take root in an old wall, or on an artificial rock-work, they will have a fair chance of remaining.

SAMPHIRE, TO PICKLE.—On the sea-coast this is merely preserved in water, or equal parts of sea-water and vinegar; but as it is sometimes sent fresh as a present to inland parts, the best way of managing it under such circumstances, is to steep it two days in brine, then drain and put it in a stone jar, covered with vinegar, and having a lid, over which put thick paste of flour and water, and set it in a very cool oven all night, or in a warmer oven till it nearly but not quite boils. Then let it stand on a warm hob for half an hour, and let it become quite cold before the paste is removed; then add

cold vinegar if any more is required, and secure as other pickles.

SANDWICHES.—These require more care than is usually bestowed upon them; for this reason, that every one believes he can cut sandwiches. Where any quantity is required, the bread should be made ou purpose, and the baker should be desired to bake it in tins; and either add a little butter to it or provit well before it is put in tins, so that it should not be full of holes, as in that case too much butter is bad, and the sandwich becomes disagreeable from being greasy. Cut the bread moderately thin, butter it very slightly indeed; lay the meat cut thi, season with salt, pepper, and mustard, as may be required; cover with a second slice of bread, trim the edges, put them one on the other, and cover with a damp cloth until required. Where tongue is used it should be boiled the day before, and when thoroughly done, pressed in the mould in which the bread is to be baked. Chickens boned and forced with a small quantity of forced veal and ham, and treated in the same way, will make excellent sandwiches. All kinds of meat used for sandwiches should be thoroughly done.

SARDINES.—These little delicacies are sometimes imported in brine; but more generally they are preserved in oil, in small tin cases, holding from half a pound to a pound, and containing in each, on the average, about twelve or twenty-four fish respectively, at one shilling and two shillings the case. They are a very wholesome and agreeable addition to the breakfast, luncheon, or supper table.

SARSAPARILLA DECOCTION.—Take four ounces of the root, slice it down; put the slices into four pints of water, and simmer for four hours. Take out the sarsaparilla, and beat it into a mash; put it into the liquor again, and boil down to two pints, then strain and cool the liquor. Dose, a wine-glassful three times a day. Use, to purify the blood after a course of mercury; or, indeed, whenever any taint is given to the constitution, vivifying the blood, and producing eruptive affections.

SASH-FASTENER.—A contrivance used for preventing windows shaking and rattling

to be prevented by tightening them. For this purpose, one part of the sash-fastener, c, is screwed to the side of the lower rail of the upper sash, and the other part, B, C, D, to the upper side of the upper rail of the lower sash. Then the part A being let down over the part B, which travels backwards and forwards in the box c, is made tight by the thumb-screw D. In this way both sashes are drawn to press against the parting bead which separates the two sashes; and, in consequence, they are effectually prevented from shaking, or from any lateral or perpendicular movement whatever, when the window is shut.

SASSAFRAS.—A laurel growing in Britain, and used for medicinal purposes in the West Indies and America. The wood, root, and oil are employed, and an infusion of the chips is used as tea, in cases of rheumatism and gout. It operates very beneficially as a diuretic and diaphoretic.

SATIN SHOES, TO CLEAN.—Rub them the lengthway of the satin with a piece of new white flannel, dipped in spirits of wine. If slightly soiled, you may clean them by rubbing with stale bread. White satin shoes should be kept in blue paper closely wrapped with coarse brown paper outside.

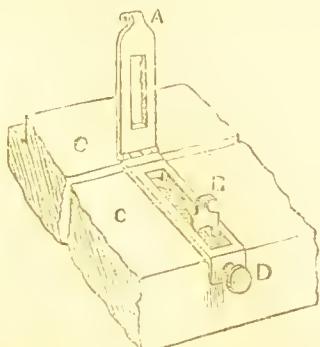
SATINS, TO CLEAN.—A quarter of a pound of soft soap, a quarter of a pound of honey, the white of an egg, and a wine-glassful of gin; mix well together, and the article to be scoured with a rather hard brush thoroughly; afterwards rinse it in cold water, leave it to drain, and iron whilst quite damp.

SAUCEPANS, TO CLEAN.—In a kettle of boiling water put about the sixteenth part of an ounce of sal-ammoniac, or two pennyworth, which can be obtained from any chemist. Let it boil one hour, and then the petrified substance will be dissolved, and is readily disengaged from the metal. A great saving of time and trouble will be effected in heating the water.

SAUCES.—See ANCHOVY, APPLE, BECHAMEL, BREAD, CAPER, CELERY, CHESTNUT, CUCUMBER, EGG, GOOSEBERRY, HORSE-RADISH, LOBSTER, MAYONNAISE, MINT, MUSHROOM, ONION, OYSTER, ROBERT, SHRIMP, SORREL, TOMATO, TURNIP, VEGETABLE MARROW, WINE &c.

SAUR KRAUT.—Take some large full-grown cabbages, cut them in very thin slices, and put them in layers of two fingers' thickness, in a tub; when it is full, put on a cover which exactly fits the tub; place on the cover a weight of forty or fifty pounds, and put the tub in a moderate heat. The cabbage sinks when fermentation begins, and the liquor rises to the surface over the cover. When it smells sour, the fermentation has begun. Then put the tub into the cellar, keep it covered, and let the pickle cover the sour kraut. Cover it close each time any is taken out. When you use it, wash it in warm water, and stew it with butter or fat; serve with ham, pickled pork, or sausages.

SAUSAGE CAKES.—Chop lean pork very finely, having removed all the bone and skin previously, and to every pound of meat add three-quarters of a pound of fat



with the wind. This will arise from the sashes not fitting tight to the grooves, and is

bacon, half an ounce of salt, a pinch of pepper, a quarter of a nutmeg grated, six green onions chopped finely, and a little chopped parsley; when the whole is well chopped and mixed, put it into a mortar and pound well, finishing with three eggs. Then have ready a pig's ear, which cut into pieces large enough to hold a piece of the above preparation of the size of an egg, which wrap up, keeping the shape of an egg, but rather flattened, and boil very gently over a moderate fire.

SAUSAGE TOAST.—Make a toast, fry two or three sausages; when quite hot, strip off the skins and spread the meat upon the toast, which should not only be made, if possible, of brown bread, but also buttered with salt butter; season it with a little pepper and mustard. It will be improved by a grating of Gruyère, Parmesan, or old Cheshire cheese.

SAUSAGES, TO FRY.—Are best when quite fresh made. Put a bit of butter or dripping into a clean frying-pan; as soon as it is melted (before it gets hot), put in the sausages, and shake the pan for a minute, and keep turning them (be careful not to break or prick them in so doing), fry them over a slow fire till they are nicely browned on all sides; when they are done, lay them on a hair-sieve placed before the fire for a couple of minutes, to drain the fat from them. The secret of frying sausages is to let them get hot very gradually, they then will not burst if they are not stale. You may froth them by rubbing them with cold fresh butter, and lightly dredge them with flour, and put them in a cheese-toaster or Dutch-oven for a minute.

SAUSAGES, TO FRY WITH APPLES.—Fry a dozen sausages in butter, take them off when they are done enough, and keep them hot till you have prepared the apples; take five or six baking-apples that are acid, pare, and take out the core; cut them in round slices, and fry in the same butter in which the sausages were dressed; when done enough, put the apples on your dish alternately with the sausages, and serve.

SAUSAGES, TO MAKE.—See BEEF, LOBSTER, MUTTON, OXFORD, OYSTER, PORK, VEAL, &c.

SAVE-ALLS.—Are used by the econo-

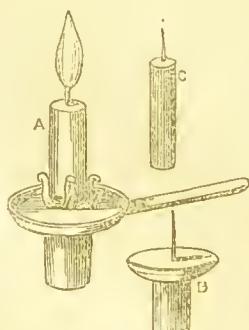
lowest inch of the candle, which would otherwise melt in the socket of the candlestick, and not only be wasted, but also injure the metal by the heat imparted to it. The best kind of save-all is a short piece of china of the form and appearance of the candle, but having a single spike of iron projecting up instead of a wick. This spike is easily forced into the lower end of the candle when it is burnt within an inch or two of the bottom; and, if this is neatly done, the candle impaled upon the point is continuous in appearance with the china and a casual observer would scarcely notice the difference.

SAVELOYS.—Are made of salt pork, fat and lean, with bread crumbs, pepper, and sage; they are always put in skuis; boil half an hour slowly. These are eaten cold.

SAVORY, CULTURE OF.—Of this plant there are two kinds, winter or perennial savory, and summer or annual savory. They may be sown in the open ground at the latter end of March or in April, in a light rich soil; thin the seedlings moderately, and they may either remain where sown or be transplanted. Of the winter savory, when the seedlings are about two inches high, it is eligible to plant out a quantity of the strongest, in moist weather in nursery rows, six inches asunder, to remain till September or spring following, then to be transplanted with holes where they are finally to remain, in rows a foot asunder. When designed to have the winter or summer savory remain where sown, the seeds may be in shallow drills, either in beds or along the edge of any bed or border by way of an edging. In the spring, or early part of summer, the winter savory may be increased by slips or cuttings of the young shoots or branches five or six inches long; plant them with a dibble, in any shady border, in rows six inches asunder, giving occasional waterings, and they will be well rooted by September, when they may be transplanted.

SAVOURY JELLY.—Take half a pig's head, boil it for one hour, then eat the meat into small pieces, put it again into the saucepan with half the liquor it was boiled in; add a little seasoning of pepper, salt, and mace; boil another hour; turn it into a mould to get cold. The above is excellent made from calf's head, which, in many country places, can be bought for a trifle; but the mould should then be lined with hard-boiled eggs cut into slices, and a little parsley added to the seasoning. This is an economical breakfast or supper dish.

SAVOY, CULTURE OF.—A species of cabbage propagated by seed sown annually, or by long cuttings of the young sprouts in spring, after the head has been cut off. Sow at the close of February, the plants of which are ready for prickling out in April, and for final planting at the end of May for use early in autumn; the sowing to be repeated about the middle of March, the plant to be pricked out in May for planting in June, to supply the table in autumn and early winter. The main crops must be sown in April and early May, to prick out and plant, after similar intervals, for production in winter and spring. In autumn,



mical in order to avoid the waste of the

when the plants have attained their full size, and before they have become quite hard, they are fit for use, and in that state are more wholesome than when older. In severe winters the full-grown crops may be taken up and preserved as in the case of drumhead cabbage; and, for prolonging them in a useful state till late in spring, the same means may be employed as are used for brocoli. The plants of the first crops should be set two feet apart each way, but the winter-standing crops are better at two feet by eighteen inches. Water abundantly, if the weather be dry, until the plants are well established. To save seed, such plants must be selected of the several varieties as are most true to their particular characteristics, and as are not the first to run. These, in open weather, from early in November to the close of February, plant entirely up to the head in rows two feet and a half each way, every variety as far from the other as possible. They ripen their seed in July and August.

SAVOY CAKE.—Take nine eggs, with two pounds of sugar, and a pound and a quarter of flour, some grated lemon-ruit, or a few drops of lemon-juice, and half a gill of orange-flower water; work them up, then put in the orange-flower water when you take it from the fire; be careful the mould is quite dry: rub it all over the inside with butter, put some pounded sugar round the mould upon the butter, and shake it well to get it out of the crevices; tie a slip of paper round the mould; fill it three parts full with the mixture, and bake it one hour in a slack oven; when done, let it stand for a few minutes, and take it from the mould, which may be done by shaking it a little.

Eggs, 9; **sugar,** 2lbs.; **flour,** $\frac{1}{4}$ lb.; **lemon-ruit** and **lemon-juice,** to flavour; **orange-flower water,** $\frac{1}{2}$ gill.

SAW-BENCH. — A very useful addition to the machinery employed on farms and other large holdings, as it enables the timber to be cut in the most economical manner for all the purposes required on the estate, and sawing by hand is a very costly operation. Circular saw-henches are made either of iron or wood, and may be purchased of all agricultural machine makers; the saws are round plates of steel with the saw-teeth cut on their outer edges; they are made of various sizes, from a few inches to three or four feet. The teeth are cut of such dimensions and shape as will best adapt them to the work required to be done.

SCALD HEAD.—This disease — almost peculiar to children, and the consequence of a scrofulous condition of the body, or proceeding from an impure, salt, or too-long continued diet of one sort, as well as neglect and dirt—is an eruptive pustular affection of the scalp, beginning in a cluster of small yellow pustules, which soon break, scab over, and, if neglected, become hard and thick; these groups, from being detached, become in time confluent, or run together, and at last spread over the entire scalp, changing the colour of the hair to a lighter shade, before it falls off in patches. Though

different in its features, scald head may be called a severe condition of *ringworm*, and, like that disease, demanding the same mode and manner of treatment. *Treatment.*—The hair is to be cut off as close as possible, and a moist bran poultice, enclosed in a bag, applied all over the head for ten or twelve hours; re-wetting the poultice every hour. To subdue the inflamed state of the scalp the following lotion is to be applied frequently for twenty-four hours after the poultice. Take of

Sugar of lead	2 drachms.
Sulphate of lime	1 drachm.
Water	20 ounzes.
Vinegar	4 ounces.

Mix. The following ointment should be applied, in addition to the poultice and lotion, every night, at bed-time, freely over the scalp, and in the morning carefully washed off in soap and water; the lotion being occasionally used in the day-time. After using No. 1 for three or four nights, it will be necessary to substitute No. 2 for the same number of times, continuing the lotion in the day time till the end.

Ointment, No. 1.—Take of

Citrine ointment	2 drachms.
White precipitate	1 drachm.
Simple ointment	2 ounces.

Mix thoroughly, and make a cerate.

Ointment, No. 2. Take of

Citrine ointment	2 drachms.
Compound sulphur ointment	$\frac{1}{2}$ ounce.
Creosote	1 drachm.
Simple ointment	1 $\frac{1}{2}$ ounzes.

Mix, and make a cerate.

Concurrent with these local means, it is necessary to give some constitutional remedies; for this purpose one of the annexed powders should be given every day; and twice a week in addition a tablespoonful or more of an infusion of senna and manna in the proportion of half an ounce of each to a pint of boiling water.

Allerative powders.—Take of

Precipitated antimony (sulphuret)	50 grains.
Grey powder	30 grains.
Scammony	36 grains.
Jalap powder	24 grains.

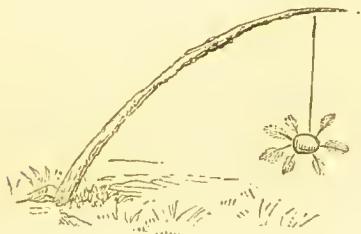
Mix, and divide into twelve powders, for a child between ten and twelve years, and give half a powder in all periods from three to eight years of age.

SCALDING PUDDING.—From a pint of new milk take enough to mix three large tablespoonfuls of flour into a smooth batter. Set the remainder of the milk over the fire, and when it is scalding hot, pour in the batter, and keep it on the fire till it thickens. Stir it all the time, to prevent it burning, but do not let it boil. When of a proper thickness, pour it into a basin, and let it stand to cool. Then put in six eggs, a little sugar, and some nutmeg. Boil for an hour in a well-buttered basin.

Eggs, 1 pint; **flour,** 3 tablespoonfuls; **eggs,** 6; **sugar,** to sweeten; **nutmeg,** to flavour.

SCALDS.—Are any kind of injury inflicted on the body by means of hot or boiling liquids, or the steam engendered from them; *steam*, from the fact of its containing a larger amount of latent, or compressed caloric, causing more serious injuries than water even at a boiling point. *Scalds*, like burns, are most fatal when occurring over cavities, as in the head, chest, and abdomen, and are to be treated in precisely the same way, and, like them, instantly protected from the action of the air by *wool*, *wadding*, or any substance that will shut out atmospheric influence.—See BURNS.

SCARECROW.—A contrivance employed in fields and gardens for the purpose of frightening away birds from the growing crops and plants. A variety of figures are adopted for this purpose, more or less effective; the one shown in our engraving is perhaps the simplest and



best, consisting of a ball stuck full of feathers, and dangling by a string from a stick.—See ROOK BATTERY.

SCARLATINA, OR SCARLET FEVER.—An eruptive febrile disease, which, though common to all ages of childhood, is not infrequently found attacking adult life. Scarlet fever is preceded by languor and lassitude, pains in the head and back, and a sense of weariness attended with cold chills; but the symptoms that specially define it from these, the general attendants of all febrile affections are, a hoarseness, difficulty of swallowing, and sore throat, attended with a peculiar speckled appearance of the tongue, which may be taken as an almost certain indication of the disease. On the third day, a small eruption, composed of several minute points congregated in patches, breaks out on the face, neck, and shoulders, gradually extending over the whole body, till the skin assumes the appearance of the shell of a boiled lobster. When the eruption comes well and freely out, the urgency of the symptoms subsides, and about the seventh day, the eruption begins to peel off, and the disease gradually declines about the tenth day from the commencement.

Treatment. Difficultly of breathing is, in the early stage, always a distressing characteristic of scarlatina, increased or modified by the facility with which the rash appears on the skin; and, as a desirable point to effect this is one of the most important events in the treatment, the first and

most important step is, either to immerse the child up to the neck, in a hot bath, or suddenly asperse the body with cold vinegar and water, wrapping the child in a blanket instantly afterwards, and putting it to bed, till a reaction in the form of a perspiration sets in, bringing out with it a full and relieving crop of eruption. A hot bran poultice should be next applied round the patient's throat, and renewed as often as it becomes cold, till the difficulty of swallowing and soreness is abated or subdued. For the thirst and fever that usually attend the disease, the following mixture is to be used every four hours, and lemonade, cold tea, or any simple beverage given occasionally as a drink. *Mixture.*—Take of

Solution of the acetate of ammonia	1 ounce.
Spirit of nitre	2 drachms.
Antimonial wine	1 drachm.
Syrup of saffron	3 drachms.
Mint water	2 ounces.

Mix, and give from a dessert to two table-spoons every four hours, according to the age of the patient. It is of absolute necessity, at the same time, to keep the bowels well acted on throughout the disease; and for this purpose an aperient powder should be given as early as possible, and repeated in a different form twice or thrice a day, as below.

Aperient powder.—Take of

Calomel	3 grains.
Jalap and seammony, of each	6 grains.
Cream of tartar	20 grains.

Mix well. For a child of ten or twelve years. Half, two-thirds, or one-third of this powder, may be given to children of more tender years according to their age.

Fever powders.—Take of

Powdered antimony and calomel. of each	1 grain.
Ipeeaueanha	1 grain.
Jalap	3 grains.
Powdered nitre	2 grains.

Mix, and make twelve such powders; giving one to a child of ten or twelve years of age every six hours, and half of such a powder either every six, four, or three hours to children of fewer years.

Particular care should be taken to guard the child from cold at the time of the cuticle peeling off, and as the disease declines the bowels should be more actively acted on, either by the exhibition of one or two aperient powders, or by a dose of senna and manna tea. Attention to this rule will save the child from those secondary consequences of scarlatina which, in obstinacy and annoyances, are often more troublesome than the fever itself. Scarlatina sometimes assumes a typhoid or malignant form, when it becomes necessary to give wine, spirits, genuine and nutritious food; but, as this form of the disease is much more rare, the diet and regimen in this eruptive fever must be low, thin, and unexciting, and the body in all cases kept cool.

SCENT-JAR.—Gather rose-leaves on a very fine day, and if you have them prefer the damask roses; lay them in a large vessel and throw in a little common salt to every layer of roses; then of rosemary leaves, lavender flowers, and knotted marjoram, take two handfuls of each, with a few bay leaves. Add any other sweet flowers approved, or make it entirely of roses. Put in about a quarter of a pound of bay salt pounded. one ounce of orris-root sliced, one pound of cloves, one ounce of cinnamon, one ounce of gum-bejamin and storax, and a quarter of a pound of angelica-root sliced; when the ingredients are mixed, cover the jar close; take off the cover when wanted, and then the scent will be exquisite.

SCHOOLS.—See EDUCATION.

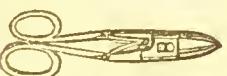
SCHOTTISCHE.—The gentleman holds the lady precisely as in the polka. Beginning with the right foot, he slides it forward, then brings up the right foot to the place of the left, slides the left foot forward, and springs or hops on this foot. This movement is repeated to the right. He begins with the right foot, slides it forward, brings up the left foot to the place of the right foot—slides the right foot forward again, and hops upon it, the gentleman springs twice on the left foot, turning half round; twice on the right foot; twice again on the left foot, turning half round; and again twice on the right foot, turning half round. Beginning again he proceeds as before. The lady begins with the right foot, and her step is the same in principle as the gentleman's. Vary by a reverse turn, or by going in a slight line round the room. Double, if you like, each part by giving four bars to the second part. The time may be stated as precisely the same as in the polka; but let it not be forgotten that the schottische ought to be danced much slower.

SCISSORS.—In the practice of horticulture scissors of various sizes are required by the gardener. A pair with very sharp and pointed blades is needed for cutting away the anthers

of flowers in hybridizing, and for thinning grasses. Shorter pairs are used for removing

flower-stalks, when the petals have fallen from roses, &c.—See PRUNING.

SCONES.—Flour, two pounds; bi-carbonate of soda, a quarter of an ounce; salt, a quarter of an ounce; sour buttermilk, one pint, more or less. Mix to the consistence of light dough, roll out about half an inch thick, cut them out to any shape you please, and bake on a girdle over a clear fire about ten or fifteen minutes, turning them to brown on both sides; or they may be done on a hot plate or ironing stove. A girdle is a thin plate of cast iron about twelve or fourteen inches in diameter with a handle attached to hang it up by. These scones are excellent for tea, and may be eaten either hot or cold, buttered or with cheese.

 Flour, 2 lbs.; bi-carbonate of soda, $\frac{1}{4}$ oz.; salt, $\frac{1}{4}$ oz.; buttermilk, 1 pint. .

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SCORCH MARKS, TO REMOVE.—If linen has been scorched and the mark has not penetrated entirely through so as to damage the texture, it may be removed by the following process:—Peel and slice two onions, and extract the juice by squeezing or pounding. Then cut up half an ounce of white soap, add two ounces of fuller's earth, and mix them with the onion juice and half a pint of vinegar. Boil this composition well; then spread it, when cool, over the scorched part of the linen, and let it dry on. Afterwards wash out the linen, and the mark will be found to have been removed.

SCORIZONERA.—A hardy perennial, a native of Spain, the south of France, and Italy, and cultivated in this country for three centuries. The root is carrot-shaped, about the thickness of a finger, tapering gradually to a fine point. For using it, the outer rind is scraped off, and the root steeped in water, to abstract a part of its bitter flavour. It is then boiled or stewed in the manner of carrots or parsnips. The roots are fit for use in August, and continue good until the following spring. In cultivating the plant, sow every year to have an annual supply. The quantity of seed for a bed four feet and a half by ten feet, to be sown in drills fifteen inches asunder, is one ounce. Sow every spring, at the end of March or in April; follow with a secondary sowing in May. This root likes a light deep soil. Allot an open compartment. Sow either broadcast and rake in evenly, or in small drills twelve or fifteen inches asunder, and earth over half an inch or an inch deep. When the young plants are two or three inches high, then thin to six or eight inches distance. Clear out all weeds as they advance in growth. The plant having a free increase all summer, the roots will, some of them, be of a moderate size to begin taking up in August, others in September, but will not attain full growth till the end of October, when, and during the winter, they may be used as wanted; or some may be dug up in November, and preserved in sand under cover, to be ready when the weather is severe. The plants left in the ground continue useful all winter till the spring; then those remaining undrawn shoot to stalk in April and May, and become unfit for the table. To save seed, leave some old plants in the spring, which will shoot up in tall stems and produce ripe seed in autumn.

SCOTCH BROTH.—Set on the fire four ounces of pearl-barley, with three Scotch pints (or six quarts) of salt water; when it boils, skin it, and add what quantity of salt beef or fresh brisket you choose, and a marrow-bone or a fowl, with a couple of pounds of either lean beef or mutton, and a good quantity of leeks, cabbages, or savoys, or you may use turnips, onions, and grated carrots. Keep it boiling for at least four or five hours; but if a fowl be used, let it not be put in till just time enough to bring it to table when well done, for it must be served up separately. Or, take the chops from a neck of mutton, cut the remainder up in small pieces, and let it stew the whole day. Boil half a pint of Scotch barley till tender,

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strain it dry; chop fine two large onions and turnips, which put with the barley and chops into a close stewpan, strain the broth into it, let it boil one hour and a half, and skim it well, seasoning it only with salt and black pepper. This will make a large tureen of broth, besides preserving the chops for table.

SCOTCH BUN.—Take four pounds of flour dried and sifted, two pounds of raisins stoned and cut, and two pounds of currants. Add six ounces of orange-peel, the same of citron and of almonds blanched and cut; mix all these together. Take one drachm of cloves, a large nutmeg, half an ounce of allspice, and the same of ginger; pound them, strew the spice on the fruit, and mix them well up. Make a hole in the flour, break in nearly a pound and a half of butter, pour warm water on the butter, to soften it a little; then work the flour and butter together, spread the paste, and pour in half a pint of good yeast; work it up very well until the paste is light and smooth. Cut off about a third part of the paste for the sheets, spread out the rest of the paste on the table, put the fruit on it. Pour about a gill of yeast over the fruit and paste, and work the fruit and paste very well together. Then make it up round; roll out the sheet which was reserved in a circular form, lay the bun on the middle, and gather the sheet round it; roll it out to the desired thickness, run a fork through in different parts down to the bottom, and pinch it on the top. Flour double grey paper and put the bun upon it, give it a cut round the side, put a binder of double paper round it, to keep it from running too thin in the oven. Bake in a moderate oven.

 Flour, 4 lbs.; raisins, 2 lbs.; currants, 2 lbs.; orange-peel, 6 ozs.; citron, 6 ozs.; almonds, 6 ozs.; cloves, 1 drachm; nutmeg, 1; allspice, $\frac{1}{2}$ oz.; ginger, $\frac{1}{2}$ oz.; butter, 1 $\frac{1}{2}$ lb.; yeast, $\frac{1}{2}$ pint.

SCOTCH CAKE.—Take a pound and a half of dried and sifted flour, the same quantity of fresh butter washed in rose-water, and the same quantity of loaf sugar finely powdered; six ounces of blanched sweet almonds, three-quarters of a pound of candied orange-peel, half a pound of citron, all cut into narrow strips; a nutmeg grated, a teaspoonful of pounded caraway seeds, fifteen eggs, the yolks and whites separately beaten; then with the hand beat the butter to a cream, add the sugar and then the eggs gradually; mix in the flour a little at a time, and then the sweetmeats, almonds, and spice; lastly, stir in a glass of brandy; butter the hoop or tin-pan, and pour in the cake so as nearly to fill it, smooth it on the top, and strew over it caraway confits. Bake it in a moderate oven; it must not be moved or turned till nearly done, as shaking it will cause the sweetmeats to sink to the bottom.

 Flour, 1 $\frac{1}{2}$ lb.; butter, 1 $\frac{1}{2}$ lb.; sugar, 1 $\frac{1}{2}$ lb.; almonds, 6 ozs.; candied orange-peel, $\frac{1}{2}$ lb.; citron, $\frac{1}{2}$ lb.; nutmeg, 1; caraway seeds, 1 teaspoonful; eggs, 15; brandy, 1 wine-glassful.

SCOTCH EGGS.—Boil five pullet's eggs quite hard; and, without removing the white, cover them completely with a relishing forcemeat, in which let scraped ham, or chopped anchovy, bear a due proportion. Fry of a delicate brown, and serve in a dish with good gravy.

SCOTCH KALE.—This dish is chiefly made of mutton, either fresh or salted; beef is only used when mutton cannot conveniently be had. Three or four pounds of meat should be put to a gallon of cold water, along with two ounces of pearl-barley, with leeks and onions, and allowed to stew until tender; if salted, put the meat into water one night, changing it once before boiling. Then have ready the hearts of two cabbages cut small, or greens if cabbages are not in season; put them into the broth, which must be allowed to boil up uncovered until reduced to two quarts. It should only be seasoned with pepper and salt, but will be much improved by the addition of a couple of onions fried in butter.

SCOTCH PANCAKES.—To a pint of cream beat up the yolks of eight eggs and the whites of six, a quarter of a pound of melted butter, a tablespoonful of flour, a nutmeg grated, three tablespoonfuls of white wine, and sugar to sweeten. When the butter is cool, mix all together into a batter; have ready a slow fire, and a small frying-pan no larger than a plate, tie a piece of butter in a clean cloth; when the pan is hot rub this round it, and put in the batter with a spoon, run it round the pan very thin, and fry on one side only; put a saucer into the middle of a dish, and lay pancakes over it till a little pyramid is formed; strew powdered sugar between each pancake, and garnish the dish with Seville oranges cut in small quarters.

 Cream, 1 pint; eggs, 8 yolks, 6 whites; melted butter, $\frac{1}{2}$ lb.; flour, 1 tablespoonful; nutmeg, 1; white wine, 3 tablespoonfuls; sugar to sweeten.

SCOURING DROPS.—Take one ounce of rectified oil of turpentine, and add to it as much oil of lemon-peel as will neutralise or overpower the smell. These drops do not affect the colour of any article. They should be rubbed on any stain with a piece of silk wetted with them.

SCRAP BOOK.—A very interesting collection of prints, paragraphs, &c., may be made by pasting these from time to time into a blank volume for that purpose. Such a collection habitually lying upon the table will afford infinite amusement not only to the possessor, but to any casual visitor who in the event of your absence when he calls is left to amuse himself in the best way he may.

SCRAP PIE.—Grease a flat dish, and make a common paste with dripping or the fat that has settled on the liquor of boiled meat; two pounds of flour and three-quarters of a pound of fat will make a large pie. The crust will be greatly improved by the addition of a teaspoonful of bread-powder or a little carbonate of ammonia. Having rolled out the crust, spread a thinnish layer carefully over the dish. Fill it with bits of cold

meat of any kind that have been collected from the plates or trimmed from a joint, or in any other way. Chop them all up together, with a little parsley and thyme and an onion, and season it with pepper and salt. If there is not meat enough to fill the dish, cold potatoes may be laid at bottom, either mashed or cut in thin slices, or slices of vegetable marrow. A little cold gravy will be an improvement. Moisten the edge crust, that the top when laid on may adhere firmly. Cover and bake. When the top crust looks well done it is enough. This will turn out whole, and is excellent eating, either hot or cold. Or the same thing may be baked in a deep pie-dish, only lining the sides of the dish with crust, not the bottom. A larger portion of vegetables may be given—potatoes, carrots, and beef, or vegetable marrow, seasoning the same, and more broth or liquor for gravy.

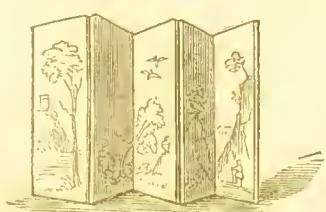
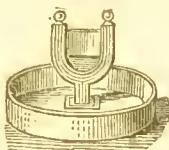
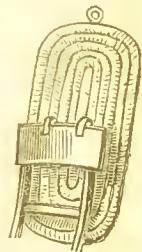
SCRAPER.—An ordinary adjunct to the doors of dwellings, and one which to ensure use should be placed in such a situation as to be easily seen. The variety of form is endless, from a single piece of iron hoop fixed across two uprights of any kind, to those of cast iron ornamented in various ways. They should always, if possible, have a receptacle for the dust to fall into. A portable scraper, as illustrated in the annexed figure, is useful, because it may be placed in any situation; as, for instance, in any part of the garden.

SCRATCHES—These, though very trivial accidents, are often, from the place in which they occur, or the habit of body of the person at the time, very annoying and troublesome injuries. The desideratum in such cases is to close the disunited cuticle and prevent a scabby seam along the injury; the best remedy to prevent the one and effect the other, is the extract of lead, which in its unadulterated state is to be applied on lint to the part, when, if it has been properly wetted, and secured from the air, it will in a few hours be perfectly reannited.

SCREEN.—A very useful contrivance for enhancing the comfort of an apartment, concentrating warmth, keeping off draughts, &c. They may be constructed in the simplest manner; a clothes horse, for instance,

times peculiar hinges, by which they can be folded both ways. Fire screens are very necessary where open fires are used. In dining rooms they are particularly suited, for those who sit with their backs to the fire; and various contrivances have been resorted to, to prevent the unpleasant effect of this situation. The simplest, and one that frequently answers the purpose, is a flat one worked of willow, that is hung on the back of each chair requiring such a defence. Fire screens for drawing rooms are less wanted than formerly; since from the great improvements in chimney fire-places, it is not so necessary to sit very near the fire. When they are employed, they are made light and elegant, and are generally only large enough to screen the face. It is requisite that the base of all fire screens should be strong and solid, as well as somewhat heavy, that they may not easily overturn.

SCROFULA.—A peculiar condition of the body, in which the healthy vital energy is in a measure in abeyance, where the system is less strong, the body less perfect, the organization less harmonious, and the living power to resist accidents less perfect and capable of resisting those influences of time, air, contagion, and accident, even at war on the frame of man, and which robust health may rebut and for a time defy, but before which the less perfect organization of scrofula ultimately succumbs. It is to this unnatural weakness of the constitution that we owe many of those diseases andills that like a scourge afflict mortality; such as consumption, mesenteric disease of the bowels in children, rickets, goitre, cretinism, hare lip, white swellings, and many other local and constitutional maladies; all deriving their origin from this physical and specific weakness of the whole or a part of the human body. Any chronic swelling of the absorbent glands is denominated scrofula, as shown both by the wen in the throat and the white, shiny, and insidious swellings in the knee, yet neither of them is, correctly speaking, scrofula; but merely the local evidence of something we feel and know, but cannot define in the system, couched in the blood, reflected in the want of general nervous energy, and manifesting itself in some local character, to which science gives a name, and unprofessional wisdom assigns the disease. The chief characters by which a scrofulous dia-thesis is known or may be suspected, are a want of perfect bodily symmetry, small, thin, or crooked limbs, a round or pigeon-breast, excessive enlargement of certain organs, broad jaws, low forehead, long neck, and large occiput, great transparency of the skin, with a rosy tint of the cheeks; when the complexion is dark, it is of a dirty, grumous appearance, when fair, unnaturally clear; a bluish ring round the eyes, which though large, clear, and sometimes black,



covered with canvas, and decorated with engravings cut from books or journals, will answer every purpose. When, however, they are made especially, they have some-

are more generally light blue, with swollen or puffed eyelids, long lashes, upper lips thick and projecting, and the general expression of the countenance voluptuous ease, with want of decision and energy; the first teeth are small, subject to decay, and the second white, liable to split, and often become prematurely decayed. The treatment of the different local forms of scrofula will be found under their several heads.—See CONSUMPTION, GOITRE, NECK, AFFECTIONS OF, &c.

SCRUBBING.—After the white-washing, paint-cleaning, and window washing of each room has been completed, let the floor be scrubbed; first seeing that it has been well swept. For this purpose have a small tub or bucket of warm water; an old saucer to hold a piece of brown soap; a large thick towel-liuen floor-cloth, and a long-handled scrubbing-brush. Dip the whole of the floor-cloth into the water, and with it wet a portion of the floor. Next, rub some soap on the bristles of the brush, and scrub hard all over the wet place. Then dip your cloth into the water, and with it wash the suds off the floor. Wring the cloth, wet it again, and wipe the floor with it a second time. Lastly, wash the cloth about in the water, wring it as dry as possible, and give the floor a final and hard wiping with it. Afterwards go on to the next part of the floor, wet it, scrub it, wipe it three times, and proceed in the same manner, a piece at a time, till you have gone over the whole; changing the dirty water for clean, whenever you find it necessary. For a large room, fresh warm water will be required four or five times in the course of the scrubbing. When the floor has been scrubbed, leave the sashes raised while it is drying. For scouring common floors that are very dirty, have by you an old tin pan with some gray sand in it; and after soaping the brush, rub it on some sand also.

SCURVY.—A disease affecting all the fluids of the body, attended by exhaustion, lassitude, fainting from the slightest exertion, pains in the limbs, back, and general weariness, soft, painful, and spongy gums, bleeding at the merest touch, while from the nose, mouth, and bowels, haemorrhage follows from the slightest accident. Externally, the disease is characterized by livid spots of various size appearing over the body, general paleness and want of colour in the skin, mental apathy, fetid breath, and loss of animal spirits. Scurvy is caused by long living on one in nutrititious diet, accompanied with confinement and hard labour, and more especially by a long course of salt provisions; hence formerly, before steam was introduced in navigation, and the crews of ships were for many months, and on long cruises sometimes for years, confined with hardly any change to an exclusive dietary of salt-junk, pickled pork, and hard biscuits, from which all moisture was totally expelled, scurvy was a disease in both the national and mercantile marine of very common occurrence, attacking whole crews with the fatality of a pestilence. Since the nature of the disease

has been better understood, and the sailor's comfort more charitably considered, scurvy may be said to have been expunged from the list of human afflictions, so rare is it that the disease now presents itself. As scurvy is engendered by living on hard and in nutrititious salt provisions, it seems natural to suppose that the only remedies required to cure this disease, would be fresh juicy foods, of a directly opposite character, and such indeed is the fact: the only remedies necessary to restore the worst case to health, if the vital energy has not been too greatly prostrated, are an abundant supply of fresh vegetables, even grass, in the absence of more agreeable articles, vinegar, and fresh beef or mutton. In bad cases, where the debility is great, the bleeding from the mouth, nose, or sores is excessive; the only medicine actually requisite is bark with wine or porter, and a gargle of alum and sage tea for the mouth, and a lotion of oak bark and alum to bathe the bleeding sores. Since the discovery of lemon or lime-juice as a specific for scurvy, the treatment of this disease has become very simple, resolving itself into a more judicious course of succulent animal and vegetable foods, with wine and bark, and a few spoonfuls of lime-juice three times a day. Among the most approved vegetables for cases of scurvy, are water-eresses, radishes, all kinds of cabbage, nettles, wormwood, ground ivy, and scurvy-grass. Oranges, lemons, cider, and vinegar are likewise beneficial. Sometimes the scaly eruption that has broken out all over the body, especially along the emaciated legs and arms, will obstinately remain, peeling off, and re-seabbing long after the system has rallied, and the patient in other respects is in an advanced stage of convalescence; thus causing much annoyance by the pain and debility in the part, and its continued proneness to bleed on the slightest irritation. In such cases, the patient must be placed under the following course of tonic and alterative medicines, continuing the nutritive diet, as much exercise as possible, and an occasional warm bath. Take of

Colombo bark	1 drachm
Cascarilla	2 drachms
Caneilla alba	2 drachms

bruise, and infuse for six hours, in twelve ounces of boiling water, strain and add

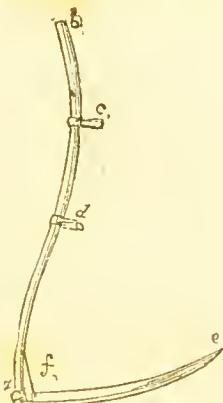
Quinine	10 grains
Sulphuric acid	40 drops.

Mix; and give one tablespoonful three times a day, either alone or in a little water. At the same time a Plummer's pill should be taken night and morning, and where the pain is considerable, or the patient is deprived of sleep, twenty-five drops of laudanum or a grain of solid opium should be given at bed-time, as long as the symptoms demand its use. In addition, to a part or the whole of these instructions, the only other means necessary are change of air and exercise, both most important adjuncts in the treatment. An occasional draught of sweet wort from a brewery will be found

of great advantage, and as a variety, for a beverage, copious drinks shoud be takeu of whey, buttermilk, or cider.

SCURVY, IN THE HEAD.—A simple and effectual remedy is the following. Into a plnt of water drop a lump of fresh quicklime, the size of a walnut; let it stand all night, then pour the water off clear from sediment or deposit; add a quarter of a pint of the best vinegar, and wash the head with the mixture, which is perfectly harmless; only wet the roots of the hair.

SCYTHE.—An implement used for cutting down grass, grain, &c. The annexed figure represents a patent scythe; the handle is



furnished with an iron ring at the end of *a*, to which the blade is attached; the projecting stud at the butt-end of the blade is embedded flush in the handle by taking away a portion of the wood; and therin is then slipped over it, and held tight in its position by an iron wedge driven between the ring and the handle. The peculiar position which the blade bears to the handle is determined by setting off the length of the blade *a* along the handle from *a* to *d*, which is the plane for the handle of the right hand, and the same length from *d* to *c* fixes the point of the scythe. The blade is still further secured in its position by the grass-nail *f*, which is hooked by one end into a hole in the blade, and nailed through an eye to the other end. The left hand handle *e* is placed to suit the convenience of the workman.

SEA PIE.—Make a thick pudding crust, line a dish with it, or what is better, a cake tin, put in a layer of sliced onions, then a layer of salt beef cut in slices, a layer of sliced potatoes, a layer of pork, and another of onions; strew pepper over all, cover with a crust, and tie down tightly with a cloth previously dipped in boiling water and floured; boil for two hours, and serve hot in a dish.

SEA-SICKNESS.—This distressing affection would appear to arise from the influence which the motion of the vessel has upon the brain and other organs. The best preventives seem to be the horizontal position, as

near the centre of the vessel as possible. Exposure to the open air renders the liability less, the deck, therefore, is to be preferred to the cabin. Stimulants combined with sedatives, have considerable effect in alleviating the symptoms. A pill composed of four grains of cayenne pepper, with two or three of extract of henbane taken at intervals, will be found useful. Creosote is also an excellent antidote; and three or four drops, on a piece of loaf sugar, will be sufficient. Some persons find themselves less liable to sea-sickness if they take food freely; with others, the reverse is the case; the effect probably depends upon the state of the digestive powers of the stomach, temporary or permanent. If these are vigorous, the excitement of digesting food acts doubtless as a counter-agent to the cause of nausea. Sea-sickness of itself is rarely injurious, but it should be a subject of consideration with persons who are liable, or likely to be, to head affection, who are the subjects of rupture, prolapsus, &c., how far they should incur the risk of these being aggravated by the action of vomiting. Some persons who do not suffer from sickness while on the water, experience nausea and other uncomfortable sensations after landing—an effect doubtless due to a partial disturbance of the digestive organs, and probably to bilious disorder. One or two doses of compound colocynth or compound rhubarb pills, will generally remove the inconvenience. A girdle worn around the body above the bowels, would prevent sea-sickness. It is said to operate by keeping the intestines from pressing upwards against the diaphragm, when the ship descends from the top of a wave. The upward motion of the vessel does not cause the distressing nausea, but affords instantaneous relief.

SEA WATER, ARTIFICIAL.—There cannot be a question that by far the simplest plan would consist in the evaporation of the sea-water itself in large quantities, preserving the resulting salt in closely stopped vessels to prevent the absorption of moisture, and vending it in this form to the consumer; the proportion of this dry saline matter being fifty-six ounces to ten gallons of water, less three pints. The portion to be used is six ounces to the gallon of water, and stirred well until dissolved.

SEA WEED, TO COLLECT AND DRY.—First wash the sea-weed in fresh water, then take a plate or dish (the larger the better), cut your paper to the size required, place it in the plate with fresh water, and spread out the plant with a good-sized camel-hair pencil in a natural form; pricking out with the pin gives the sea-weed an unnatural appearance, and destroys the characteristic fall of the branches, which should be carefully divided; then gently raise the paper with the specimen out of the water, placing it in a slanting position for a few moments, so as to allow the superabundant water to run off; after which place it in the press. The press is made with three pieces of board, two sheets of blotting paper; on that lay the specimens; place straight and smooth over them

a piece of old muslin, fine cambric, or linen, then some more blotting-paper, and place another board on the top of that, and continue in the same way; the blotting paper and the muslin should be carefully removed and dried every day, and then replaced; at the same time, those specimens that are sufficiently dried may be taken away. Nothing now remains but to write on each the name, date, and locality. You can either gum the specimens in a scrap-book, or fix them in as drawings are often fastened, by making four slits in the page, and inserting each corner. This is by far the best plan, as it admits of their removal without injury to the page, at any future period, if it be required either to insert better specimens or intermediate species. Some of the larger algae will not adhere to the paper, and consequently need gumming. The following is the best method of preserving them. After well cleaning and pressing, brush the coarser kinds of algae over with spirits of turpentine in which two or three small lumps of gum mastic have been dissolved by shaking in a warm place; two-thirds of a small phial is the proper proportion, and this will make the specimens retain a fresh appearance.

SEALING CEMENT.—To secure letters and packages from being opened or tampered with, beat up some fine bean flour with the white of an egg, and make it into a paste. Use a little of it in the form of a wafer, close the letters, &c., with it, and hold the sealed part to the spout of a teapot containing boiling water. The steam will harden the cement to that degree that the letter cannot be opened without tearing it, and will thus prove more secure than gum, wafer, or wax.

SEALING WAX.—Take four ounces of shell-lac, one ounce of Venice turpentine, and three ounces of vermillion. Melt the lac in a copper pan suspended over a clear charcoal fire, then pour the turpentine slowly into it, and soon afterwards add the vermillion, stirring briskly all the time of the mixture with a rod in either hand. In forming the round sticks of sealing-wax a certain portion of the mass should be weighed while it is ductile, divided into the desired number of pieces, and then rolled out upon a warm marble slab by means of a smooth wooden block like that used by apothecaries for rolling a mass of pills. The oval sticks of sealing-wax are cast in moulds with the above compound in a state of fusion. The marks of the lines of junction of the mould-box may be afterwards removed by holding the sticks over a clear fire or passing them over a blue gas-flame. Marble sealing-wax is made by mixing two, three, or more coloured kinds while they are in a semi-fluid state. From the viscosity of the several masses, their incorporation is left incomplete so as to produce the appearance of marbling. Gold sealing-wax is made simply by stirring gold-coloured mica spangles into the musk or other perfume. If one part of balsam of Peru be melted along with ninety-nine parts of the sealing-wax composition, an agreeable fragrance will be ex-

haled in the act of sealing with it. Either lamp-black or ivory-black serves for the colouring-matter of black-wax. Sealing-wax is often adulterated with rosin, in which case it runs into thin drops at the flame of a candle.

SEASONING.—This is a very important element in the art of cookery, and one which requires experience, judgment, and delicacy of taste. The precise quantities for particular dishes it is impossible to give, because tastes differ so materially that what is grateful to the palate of one person may be very disagreeable to that of another. In considering this subject, however, the following remarks on the various ingredients used in seasoning generally will scarcely be out of place. In the use of salt in cooking considerable judgment is required. The best rule is to employ as little as possible. It is easy to add salt afterwards if required: but when a dish is made too salt the fault is irremediable. Sugar may be applied with advantage in various dishes, but great care must be taken that in such preparations it should be employed to enrich, not to sweeten. The taste of sugar should not predominate, or even be recognised. Meat intended to be boiled or fried should be well peppered but never salted; salt renders it hard. In boiling vegetables, a certain portion of salt should always be put into the water. It should be well understood that pepper and all descriptions of spice require to be subjected to the action of heat to bring out their genuine flavour. In the use of spices it is important that the aroma which they give forth should not be allowed to evaporate or escape. Aromatic herbs used in seasoning should not be exposed to the open air, but excluded from it as much as possible. This may be partially effected by tying the dried herbs in paper-bags, but it is much better to reduce the leaves to a coarse powder, and confine it in well-corked bottles. Spices should be put into soups whole, allspice is one of the best for this purpose. Seville orange-juice has a finer and milder acid than lemon-juice; but both should be used with caution. Sweet herbs for soups or broths consist of knotted marjoram, thyme, or parsley—a sprig of each tied together. The older and drier onions are the stronger in flavour; in dry seasons also they are very strong: the quantity should be proportioned accordingly. Although celery may be generally obtained for soup throughout the year, it may be useful to know that dried celery-seed is an excellent substitute. It is so strongly flavoured that a drachm of whole seed will enrich half a gallon of soup as much as two heads of celery. Mushrooms are much used, and when they cannot be obtained fresh, mushroom ketchup will answer the purpose, but it should be used very sparingly, as nothing is more difficult to remove than the over-davouring of ketchup. A piece of butter, in proportion to the liquid, mixed with flour and added to the soup when boiling, will enrich and thicken it. Arrowroot or potato-flour is well adapted for the thickening of soups in absence of flour. The fine flavouring ingre-

dients, as ketchup, spice, wine, juice, &c. should not be added till the soup is nearly done. Wine, especially, should always be added late in the making; as it evaporates very quickly in boiling.

SEDATIVE OINTMENT.—The violent local irritation which often follows the application of blisters to the surface of children, is a serious objection to their use, and requires that particular care be taken to lessen the liability of sloughing. Should, however, the ulcer be very irritable, the following ointment, thickly spread on lint, will be found serviceable:—Lime-wafer, oil of almonds, of each half an ounce; mix well together, then add prepared lard, one ounce.

SEED-CLOTH.—An article for the reception of light seeds, and of great use to the seed-grower. The cloth may be of any size; but one three or four feet wide, and ten or twelve feet long, will be found most convenient, when there is a great variety of seed to be dried. Sew the edges of the cloth



to a cord on all the four sides, and in an angle introduce a loop or ring. For every cloth have four pins, each having a hook near the top on which to hang the loop or ring; the pins are pointed at each end, that they may enter easily into the ground, and have a cross-piece about a foot from the top to prevent them from going in too far, and from being drawn too much on one side by the tension of the cloth.

SEEDS, TO PRESERVE.—Seeds of plants may be preserved, for many months at least, by causing them to be packed either in husks, pods, or in absorbent paper, with raisins or brown moist sugar; or a good way, practised by gardeners, is to wrap the seed in brown paper or cartridge paper, pasted down, and varnished over.

SEIDLITZ POWDERS.—These are usually put up in two papers. The large blue paper contains two drachms of Rochelle salt, and two scruples of carbonate of soda; in practice it will be found more convenient to mix the two materials in larger quantity by passing them twice through a sieve, and then to divide the mixture either by weight or measure, than to make each powder separately. When wanted for use, dissolve the contents of the blue paper in half a tumbler of cold water, stir in the other powder, and drink during effervescence.

SELTZER WATER.—An effervescent draught chiefly distinguished by the large amount of carbonic acid it contains in combination with alkaline carbonates, such as those of soda, magnesia, and lime; it also contains common salt. It is useful in some forms of dyspepsia, gravel, &c., and is an

excellent restorative when the system has undergone any extraordinary exhaustion. To make it, take twenty ounces and a half of water impregnated by the usual apparatus with carbonic acid gas, and dissolve in it four grains of carbouate of soda, two grains of carbonate of magnesia, and twenty grains of common salt.

SEMOLINE PUDDING.—To a quart of milk put three tablespoonfuls of semoline; when the milk boils, stir it in gradually; then add one ounce of sweet almonds and two or three bitter almonds well pounded; sweeten to taste with white sugar; boil altogether forty minutes, put it in a mould wet with cold milk; let it stand till perfectly cold; turn it out and serve with preserved fruit.

SENNA CONFECTIION.—Take of senna four ounces; figs, half a pound; cassia pulp, tamarind pulp, and the pulp of prunes, each four ounces; coriander seeds, two ounces; liquorice, one ounce and a half; sugar, one pound and a quarter; water, one pint and a half. Rub the senna with the coriander, and separate, by sifting, five ounces of the mixture. Boil the water with the figs and liquorice added, until it is reduced to one-half; then press out and strain the liquor. Evaporate the strained liquor in a pan by boiling until twelve fluid ounces remain; then add the sugar and make a syrup. Now mix the pulps with the syrup, add the sifted powder, and mix well. Use as a purgative.

SENSITIVE PLANTS.—A species of plant possessing an irritability so marked a kind as to gain for them their peculiar name. The Venus fly-trap is one of these, having pointed leaves which are furnished



on their edges with a row of showy prickles. Another of this sensitive tribe is the *Desmodium gyrans*, which has a spontaneous motion; and its leaves frequently move in various directions without order or co-operation.

SEPTEMBER, GARDENING FOR.—**KITCHEN GARDEN.** *Angelica*, sow. *Aromatic* and potherbs, finish gathering. *Artichokes*, break down. *Asparagus*, plant forcing-beds, weed,

&c. *Balm*, plant. *Beans*, earth up, &c. *Beet, red*, take up as wanted. *Borage*, sow, thin advancing crops. *Borecole*, plaut. *Burnet*, plant. *Cabbage*, sow, plant, earth up advancing. *Cardoons*, earth up. *Carrots*, advance. *Cauliflowers*, prick out, draw earth to advancing. *Celery*, earth up, plant. *Chervil*, sow. *Coriander*, sow. *Corn salad*, sow. *Cress, American*, sow. *Cucumbers*, attend to, sow, ridge out. *Dill*, sow, earthing up atted to. *Endive*, plaut, attend to, blanch, &c. *Fennel*, plant. *Finochio*, earth up. *Hoeing*, attend to. *Hyssop*, plant. *Jerusalem artichokes*, take up as wanted. *Kidney beans*, earth up advancing. *Leeks*, attend to advaneing. *Lettuces*, plant out, sow. *Melons*, attend to, protect at night. *Mint*, plant. *Mushroom beds*, make, collect spawn. *Nasturtium berries*, gather as they become fit. *Onions*, sow, attend to advancing, gather for storing. *Parsley*, cut down. *Peas, hock*, &c. *Pennyroyal*, plant. *Pot marjoram*, plant. *Potatoes*, take up for storing. *Radishes*, sow. *Rhubarb*, sow. *Sage*, plant. *Salading*, small, sow. *Savory*, plant. *Savoys*, plant. *Seeds*, gather as they ripen. *Sorrel*, plant. *Spinach*, sow. *Tansey*, plant. *Tarragon*, plant. *Thyme*, plant. *Turnips*, sow, hoe advancing.

General Remarks.—Earth up and store only in dry weather. Stick, stop, support, cut down, blanch, and thin where you see it necessary; no time is to be lost at this season. Remove all decayed leaves, haulm, stems, &c.; and the remains of all crops which have been taken, so as to preserve order and neatness; and make way for other crops or winter fallows. Destroy insects and vermin. Dress, sort, and put up seeds which have been well dried. Finish hoeing edible bulbs and potatoes.

FLOWER GARDEN.—Transplant in any moist or showery weather this month, the perennial and biennial seedlings to their allotted situations, with a ball of earth round their roots. Propagate fibrous-rooted plants by all the modes, but more especially from slips, rooted or unrooted, the stalky parts of herbaceous plants being now of a proper texture for this purpose. Prepare the spots where it is intended to deposit anemone and ranunculus roots any time during the month; and dig all beds and borders which are vacant, to prepare them for receiving roots and plants next month. Transplant peonies, flag iris, monkshood, fraxinella, and such like plants to part their roots and remove each root to its destined position. Transplant evergreens. Plant cuttings of honeysuckle, and other shrubs; hyacinth and tulip roots for early spring bloom; and box by slips or roots. Also crocuses and other bulbs, and such autumn flowering bulbs as were omitted to be planted in the spring. Sow seeds of bulbous flowers, if not done in the preceding month. The seeds of most biennials and perennials may be sown in this month with advantage, provided protection can be afforded to them in the winter. On the whole, however, it is better to defer the business till spring, unless with a few sorts that sometimes lie a whole year before they come up when sown at that

season. Among them may be enumerated columbine, agrimony, chelone, &c. If sown now, their seeds will come up the following spring, and they will flower the same season. If the end of the month be wet, hoop and mat such plants as will be injured by excess of moisture. Among these are the primular bulb and tender annuals planted in groups over the borders; also bulbs, as the tuberose and Guernsey lily, planted or plunged in the borders.

General Remarks.—Prepare the ground for florist's flowers. Trench and sift the earth where tulips and hyacinths are to be planted, at least three feet deep. Replace the more tender auriculas in their frames; but keep off the glasses except when it rains. Most of the greenhouse and hothouse plants will now be advanced; remove them to cold frames, or to the greenhouse or dry stove, according to their natures, to harden them gradually. Some may go directly to the stove. The beginning of this month is a fit time to repair, paint, glaze, and clean the flues of greenhouses. Replace some of the more tender plants from the open air at the beginning, and the whole in the course of the last week of the month. Remove all decaying flowers, that do not bear ornamental seeds or berries. Dress and mow turf and clean gravel.

SEPTEMBER, THINGS IN SEASON.—*Fish*. Barbel, brill, carp, cockles, cod, conger eels, crabs, dace, eels, flounders, gurnets, haddock, hake, herrings, lobsters, mullet, mussels, oysters, perch, pike, plaice, prawns, shrimps, soles, tench, thornback, turbot, whiting.

Fruit. Apples, cherries, currants, figs, filberts, grapes, hazelnuts, medlars, melons, peaches, pears, plums, quinces.

Meat. Beef, lamb, mutton, veal, venison.

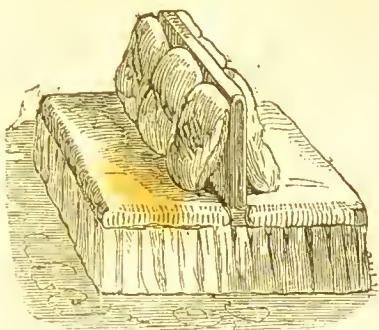
Poultry and Game. Chickens, ducks, fowls, geese, larks, leverets, partridges, pheasants, pigeons, plovers, pullets, rabbits, teal, turkey-poultis, wheat-ears.

Vegetables. Artichokes, asparagus, balm, beans, cabbages, carrots, cauliflowers, celery, chervil, cucumbers, endive, finochio, garlic, herbs of all sorts, leeks, lettuces, mint, mushrooms, parsley, parsnips, peas, potatoes, radishes, salad of all sorts, shallots, turnips.

SERAGLIO CAKES.—Boil together for a moment in a little water, a small quantity of sugar, a quarter of a pound of butter, a little grated lemon-peel, a pinch of salt, and as much flour as will make a firm paste; shake the saucepan well over the fire, until the paste separates from the sides of it; then remove it, and while it is yet warm, add an egg well-beaten and mixed with the paste until it adheres to the finger: then remove it entirely from the fire, and add as many more eggs, one by one, as the paste will absorb, with pounded macaroons, orange-flowers cut fine, and some grated lemon-peel; form the cakes into any shape desired, and bake.

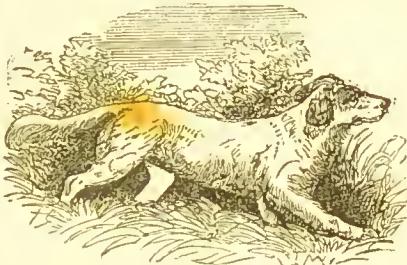
SETTEE.—A kind of lounging seat for drawing-rooms and other apartments, which are extremely convenient and agreeable, and

help to break the formality of the more important furniture. The settee seen in the



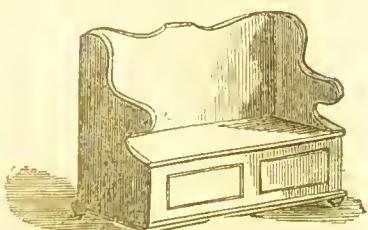
engraving is the best adapted for conversation, viewing pictures, and so forth.

SETTER.—A species of dog used in sporting. It is peculiarly adapted to those sportsmen who range widely and follow sporting throughout the season with great



ardour, particularly over moorlands, &c. The dash of these dogs, their superior speed, and little liability to become foot-sore, for the hairy padding of the foot enables them to go through vast fatigue without that shortening stroke and apathy in pursuit which will occasionally mark the progress of the fatigued pointer. The setter, in size, equals the usual run of pointers; in colour, he may be met with of almost every tint and marking common to hounds and spaniels. Although colour is not much of a criterion in the selection of this dog, still it is to be noticed that the most superior of them have a preponderance of the liver hue.

SETTLE.—An old-fashioned seat with a



high close back, to defend those who sit

thereon from cold and currents of air. They were formerly common in the corners of the large cottage chimneys, and the seat formed a chest for containing household articles. They may still be used with advantage in apartments that are more than usually exposed to the action of cold.

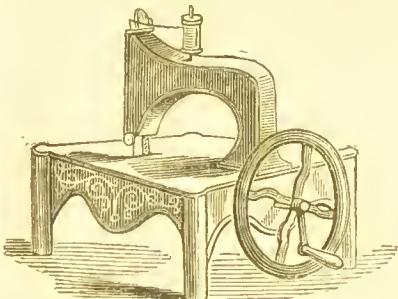
SEWING.—A female employment productive of the greatest benefit to the household, and calculated to pass the time profitably. Sewing by candlelight should be avoided as much as possible, especially articles of a black shade, but when engaged upon these, the eye will experience considerable relief if the black material is placed upon a piece of white calico. The precise meaning of the word sewing is the forming of two edges of cloth, calico, or other material together; if the edges happen to be good salvages, they require only to be placed evenly, and to be pinned at short distances, or tacked slightly to prevent puckering. Should the edges be raw, one edge must be turned down once, and the other must be turned down double the width for the purpose of being folded back again in the middle, to form what is called the fell. When the seam has been thus prepared, the cloth or other material should be held upright, firmly, with the thumb along the side of the first finger of the left hand, and supported with the second and third fingers. The needle should be pointed towards the chest; and the stitches must lie straight across the seam, and not be taken too deep. No knot should be made in the thread at the commencement, but one end of the thread should be left out, and sewn over for the first few stitches. The point at which the sewing is to be commenced, is along the side of the finger, about the beginning of the nail. When a fresh thread is required, an end of the thread in use should be left together with the same length of the new one; and both of them sewn over neatly and carefully. When the seam is finished, it should be flattened with the thumb-nail. The running and felling is then proceeded with, by laying the raw edge of one of the parts once down, in the same manner as the first fold of a hem; the other part should then be placed upon it, a thread or two below the double edge, and run together, making the stitches short, about three threads up, and three threads down. Then the seam should be laid down very smoothly and hemmed on the other side. For the double seam, or sewing and felling, a fold should be laid down in the same manner as for a run-and-fell seam; the seamstress turning it back again from her exactly at the raw edge of the turn, so that the fold may be double. Then a single fold should be laid down on the second piece, and the edges of both placed together, with the turns inside. These should be sewn neatly, and when finished, the seam laid down neatly, and the fold hemmed on the other side. Observe that the sewing must be on the right side, and the hem on the wrong side. Allied to sewing is another process, known as stitching. This is employed with the double intention of ornament and

strength. It is much used in the collars and wristbands of shirts, and for various other purposes. For stitching, the material must be double. In commencing, care should be taken that both ends of the article to be stitched are quite even; and then a fold laid down to stitch to. The depth of the fold must depend upon the distance from the edge at which it is intended to be stitched. The fold should exceed the stitching by some threads. A thread must then be drawn on the right side, and the work hid in the same manner as for hemming. The needle must be passed in at the wrong side, between the double material, and brought out on the right side, where the seamstress must begin, so that the end of the thread may not be seen on the wrong side. The stitch is formed by first bringing the needle out two threads from the end of the wristband or collar; then to be put back two threads behind the thread on the needle, and brought out two threads before it. By taking two threads only, the stitches are always proportionate to the quality of the material, and do not require to be contracted by pulling the hems. When a new thread is required, the needle must be passed to the wrong side, and the thread fastened off neatly; then the new thread must be formed, and the needle passed out to the right side two threads before the preceding stitch; then proceed as before. When the row is finished, if the other side of the article have a raw edge, in most cases it is better to turn it down, but if there be a good salvage that is not necessary. In that case the salvage should be folded exactly in the middle, taking care that the ends are even, or that they correspond with each other, then the ends should be sewn neatly, or turned out the wrong side, and run half-back stitched every two stitches, so as to make the work the stronger at a moderate distance from the edge. But if sewing be preferred to running, the right side of the article must be held towards the seamstress while sewing it, a double thread drawn on the opposite side of the wristband, at the same distance from the edge as on the first side, and the row stitched in a similar manner. The half-back stitch alluded to is accomplished by putting the needle back at every two stitches in the running. *Hemming* may be considered as the rudimentary process in needlework. In learning this art, a single yard of calico may be hemmed all round; then, the hems being cut off, the hemming may be renewed; and repeating the process of re-hemming and cutting off, one yard of calico will suffice to perfect the learner. If the piece of cloth or calico about to be hemmed be a square piece, and if the sides appear to be of nearly an equal length, the piece should be folded like a half-handkerchief, to ascertain if the sides are of *exactly* the same length. If this should prove not to be the case, a thread must be drawn out of the calico or cloth, and the material cut even by the open line thus made; then the raw edge must be cut straight and smooth. If the piece about to be hemmed have a salvage on one or two

sides of it, those sides do not require hemming. The next process is to turn the raw edge down once, and then turn it down again the same width as at first. The work must be held upon the first finger of the left hand. The needle must be pointed from the seamstress, and the end of the thread turned under the hem, and drawn out till it nearly approaches the end; then the end must be neatly turned in under the hem with the point of the needle. When a new thread is required, the end of the thread in use must be cut off and turned under the hem; then the needle must be set in, pointed from the seamstress, and the new thread managed in the same manner as before. Turn threads left between every two stitches, well place them at a good distance. *Gathering* is another branch of needlework. It is a term used where a full part is to be set into a plain one; as the sleeve of a shirt into a wristband, or the upper part of a shirt into the collar. When the seamstress is about to put it together, and to fasten in gathers, care should first of all be taken that the loose edges are pared off, and the part about to be gathered cut perfectly even. It should next be folded into two parts, and then into four parts, and a mark made with a piece of thread at each quarter. Then a fold should be laid down, twelve or fourteen threads from the raw edge, creased, and turned back again. The running must be along the creased line, as it is improper to draw a thread. The side to gather on is the right one, taking up two threads on the needle, and missing three or more, according to the fulness of the article. Four or five stitches may be taken on the needle at a time, but the thread need not be drawn tightly, except at every finger-length; and if a fresh thread be required, it should be taken at a half or quarter only. When the gathering is finished, the fulness should be drawn up rather close, and the thread secured by twisting it round a pin; the gathers must next be drawn straight between the thumb and fingers, and traced or stroked down, one at a time, with a large needle. To do this neatly, the gathers must be placed side by side, and held down firmly and smoothly with the thumb upon the first finger, exactly as though they were being taken up on the needle separately. Then divide the plain part—that is, the collar or wristband—into four equal parts, and, having opened the gathers a little, pin the corresponding parts of each together, placing the edge of the wristband or collar exactly over the gathering-thread. Then draw the gathering-thread so that it may agree in length with the wristband or collar, and fasten the thread by twisting it round the last pin. The thread should never be cut until the fixing-in of the right side is finished. In doing this, the work should be held with the thumb upon the first finger of the left hand; the gathers, which should be distributed as little as possible, lying nearly from left to right, and equally disposed of. The end which is farthest from the seamstress must be commenced with, setting in the first stitches firmly and

neatly, pointing the needle almost along the gathers. One gather only should be taken up at a time. The wrong side of the material should be set with equal care; and the edge kept on that side, so as to agree precisely with the edge upon the right side. *The herring-bone stitch* is effected by working from left to right, and taking each stitch backwards, the thread being always kept behind the needle. In beginning the edge of the flannel it must be turned down once, and about two threads taken on the needle, close under the raw edge. The end to commence at is the contrary one to that at which hemming is commenced. The next stitch must be taken three or four threads back, near the top of the turning; and thus the edge is held down by the thread passing over it in a zig-zag manner. If the material is calico or muslin instead of flannel, and has four sides or edges, a fold must be turned down on each of the edges, and two threads drawn from each side, about twelve or fourteen threads asunder, and three or four from the double edge. The piece must then be folded in the middle, and two threads drawn, one on each side of it, so as to have the same number between them which was left at the edge. The material must be again folded at the quarters, and threads drawn in the same manner.

SEWING MACHINE.—A machine bearing this title has been invented within the last few years; the object of which is to perform the operation of sewing more



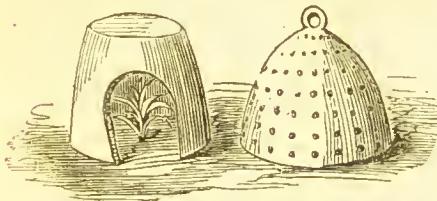
economically and expeditiously than can be accomplished by ordinary manual labour. A variety of these implements have been from time to time introduced, differing in details, but agreeing in the following general principles and application: The stitching is effected by two needles, each of which is supplied with thread from its own bobbin. One needle working vertically, and the other horizontally through the loops made by the first, a chain-stitch is produced which possesses great beauty as well as superior strength. The entire apparatus is about a foot in height, is actuated by a small heavy wheel, to which a haudle is attached, and in very rapid work the handle is drawn by a treadle and link. Upon the shaft, at the end of which the driving wheel is keyed, is a cam-groove, in which the short arm of a lever terminating in a globe is made to work. The upper end of this lever receives

a reciprocating motion from the continued action of the machine, and the length of stroke thus obtained is employed, together with a subsidiary arrangement, for giving motion to the vertical needle. A large arm rises from the apparatus at the back, and stands forward, its front extremity terminating in the apparatus which carries the needle. Immediately underneath the top plate of the machine, and so placed as to act upon the same point as the extremity of the vertical needle, is the horizontal needle. This instrument is of spiral form, the particular curve of which ensures the perfection of the work. It is mounted on a short vertical arbor, which carries a toothed pinion. A toothed arc gears into this, and the arc having a reciprocating motion imparted to it by a cam-grove apparatus upon the main shaft, participates in that motion. The bobbin for the vertical needle is placed vertically in a convenient situation at the top of the machine; by means of a tightening screw, the tension of the sewing thread is adjusted, and with it the tightness or looseness of the sewing. From the bobbin the thread is conducted through an eye fixed on the apparatus, and then through the eye of the needle, which is not far from the point, and finally returned upwards before the operation begins. The bobbin for the horizontal needle is mounted on a horizontal axle in a corner of the apparatus underneath the top plate. Its thread is laid in a small groove formed on the outside of the spiral, and is finally brought through an eye near the point. The cloth having the line of sewing ocreased or otherwise marked out, is laid upon the top plate, with the beginning of the line immediately under the vertical needle. If the machine be impelled slowly, it will be seen that the vertical needle is driven downwards through the cloth, and that immediately after it is drawn back the continuous action of the machine drives the horizontal needle through the loop which it leaves. Thus, the thread of the vertical needle embraces that of the horizontal one at the same time that the latter also enters the cloth. By the aid of another cam, a short stroke is given to a small platform having a surface cut into minute pyramids, so as to enable it to grasp the cloth firmly when pressure is made upon it from above, by means of a plate with a spiral spring re-acting against a fixed obstacle. The result of this simple contrivance is, that at the completion of each stroke of the needles the motion of the platform carries the cloth from under the vertical needle, and that needle at each successive stroke, and the horizontal needle also, works in new cloth. As the length of the stroke of the platform admits of adjustment at the pleasure of the operator, it follows that the stitching can be made as coarse or as fine as is desirable. The machine being thus rendered self-feeding, it is only necessary to guide the cloth in such a manner that the needles shall work upon the required line. By the aid of such a machine as this, sewing is effected with great rapidity, running off in something less

than a minute a line of stout sewing which an ordinary seamstress would scarcely overtake in the course of half an hour. By the hand, the machine may be driven at the rate of five hundred stitches a minute, by the foot at nearly twice that rate. The sewing performed is strong, close, and regular, and altogether such as it would require a very firm and well-practised hand to equal.

SHADDOCK.—A fruit of the citron species, cultivated chiefly for ornament. It has the handsomest leaf of the whole tribe, and the fruit is larger than the orange. When several sorts of oranges are presented at the dessert, it makes a striking addition to the variety. The juice is of a sub-acid sweetness, and is excellent for quenching thirst; and the fruit, from the thickness of its skin, will keep longer on sea voyages than any other of the citron species. The shaddock may be propagated in the same manner as the lemon,

SHADES, IN GARDENING.—These contrivances are usually made in the form of a flower-pot, as seen in the engraving, but with a section cut from one side to admit the air and light. This open side in the case of auriculas and alpine plants, is placed towards the north, and in the case of tender



plants to the south, or other points. These utensils are exceedingly useful in transplanting tender plants, and in cultivating alpine plants. One species is entirely perforated with holes for shading ferns, mosses, and fungi. Common pots are often used for sheltering and shading newly transplanted articles with the greatest benefit.

SHADOWS ON THE WALL.—A variety of shadows of different objects may be thrown upon the wall for the amusement of children, by a dexterous management of the hands and fingers. Fig. 1 is intended to represent a fox. The operator should

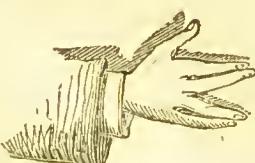


Fig. 1.

bark like a fox, while the fingers work to represent the action of the animal's mouth.

Fig. 2 represents a rabbit, and the resemblance may be made all the more vivid by



Fig. 2.

moving the fingers with an action similar to that used by rabbits in running. Fig. 3 is designed to show a bird feeding. The

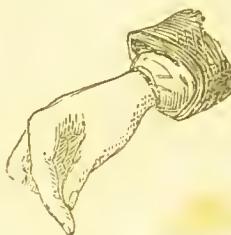


Fig. 3.

space between the first and second fingers is for the eye, and the bird may be made to appear as if eating, by means of the left hand, with a nut or piece of biscuit in it.

SHALLOT, CULTURE OF.—Of this esculent there are two varieties, the common, which puts forth long, slender, dark-green leaves, and the *long keeping* with larger bulbs and of dwarfer growth, and keeping good for nearly two years. In propagating the shallot, each offset will increase in a similar manner as its parent, and may be planted out either in the months of October and November or early in the spring from February to the beginning of April. Autumn is the best season for planting if the soil be dry. If planted in beds, let them be three feet and a half wide, and three or four inches higher than the alleys, and the surface of the bed a little arched. Set out the rows nine inches apart from row to row, and plant the offsets singly with the hand upon the surface of the bed, six inches apart in the row, just pressing each bulb down firm in the soil; see occasionally that they are not cast out of their places by worms or other vermin; or each bulb may be covered with either a little old tan or coal ashes in little ridges, along the rows, an inch and a half or two inches deep. When the bulbs are well established and growing, the covering should be removed with the hand; no other culture is required, except earth stirring. Take them up for storing when full grown, towards the end of June or July, as soon as the leaves begin to decay, spread them out to dry on boards in some airy situation.

SHALLOT SAUCE.—Put a few chopped shallots into a little gravy, boiled clear, and nearly half as much vinegar; season with pepper and salt: boil for half an hour.

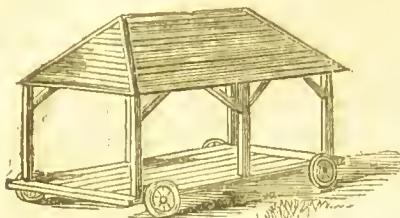
SHALLOT VINEGAR.—Split six or eight shallots; put them into a wide-mouthed quart bottle, and fill it up with vinegar. Stop it close, and in a month the vinegar will be fit for use.

SIAMPOOING.—A system of mechanical manipulation of the various parts of the body for the cure of disease. It is efficacious in rheumatic affections, sprains, &c., and is generally practised in connection with the bath by persons properly instructed in the art. Shampooing to a certain extent may be put in force by chafing the affected parts briskly and unremittingly, until the surface of the skin is in a complete glow.

SHAVING.—This is a process which may be performed in a slovenly and bungling manner, or it may be done with great art and dexterity. In the first place, the hair should be softened by soaking it in water or a lather of soap, by which it is rendered much more soft and more readily cut. A strong lather of soap is usually applied; which, in the first place, acts as a softener from the water; next as a lubricating fluid it prevents the razor from sticking to the skin, or, as it were, stumbling over its asperities; and lastly, from its semi-solid consistency, it affords a support to the hair when opposed to the edge of the razor. The soap used should be of such a nature as to make a strong lather full of small bubbles, and it should be as free from all superfluous alkali as possible, to avoid irritating the skin. In applying it, it is better to wash the skin beforehand, then brush on the lather with the shaving brush, working it well into the skin, and let it remain to soften the hair for a few minutes, during which any other part of the toilet may be performed. Then apply another coat of lather, and at once proceed to take off the beard with the razor, warmed to the temperature of the skin, or rather above it. Most people find it better to stretch the skin by the other hand, but a very skilful shaver manages the act without this process. The razor should be drawn in a gently sawing manner across the beard not exactly at right angles to it, but nearly so; the art consisting in getting the two angles correctly, and in avoiding the chop instead of the proper sawing motion. By the two angles are meant that made by the surface of blade with the surface of the skin, and that between its edge and the axis of the hair. The angle with the skin should be as slight as possible, close contact causing adhesion, and thereby impeding the free play of the blade; but anything short of this is the proper mode of holding it. Practice here, however, is the grand point, and without it no one will ever succeed as a shaver. When the head is to be shaved it is better to remove the hair with the scissors to within half an inch, or even less, of the scalp, after which the razor may be used as for the beard, following the direction of the hair, and not meeting it.

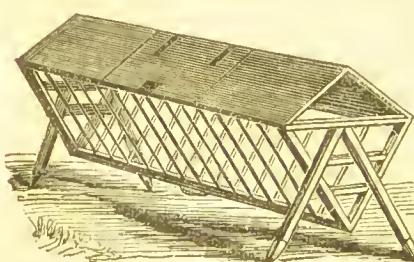
SHEEP, MANAGEMENT OF.—The management of sheep varies much in different districts; according to the nature and extent of the farms on which they are kept, and the methods of farming that are adopted on them; but, under all circumstances, the constant endeavour of the sheep-owner is to preserve his flock in as good a condition as possible at all seasons. The best kind of food in general for sheep is nutritious grassy pasture growing on a dry and firm soil. In point of economy, the folding of sheep upon turnips during one half of the year, and on clover, tares, &c., during the other half, is preferable to the system of grazing at large, for by this management a due proportion of every arable farm is kept under green crops. The tendency which most sheep have to ramble, renders it necessary for them to be attended by a shepherd and his dog. The duties of a shepherd are very irksome, and require to be performed by a man of firm resolution, good temper, and discretion. To keep the flock within bounds may be troublesome, but much may be done in the way of preventive; and at all events the sheep must not be harassed and chased. Being naturally of a timid and gentle nature, the sheep ought to be treated with a degree of gentleness, and taught rather to regard their shepherd as a friendly protector than a tyrant. A dog should only be rarely and cautiously used. Much depends on the dog being of the proper breed, and well-trained to his duty. A good dog gives little tongue, he is seldom heard to bark: his great knack consists in getting speedily and gently round to the farther extremity of the flock, and then driving them slowly before him in the direction which his master has pointed out. A wave of the hand in a certain direction and the word "there," are usually enough as a sign. In those districts that are exposed to storms, it is important to afford shelter to the flocks. Where there are jutting or over-hanging rocks or bushes, the sheep will crowd under their lee, and so far protect themselves from harm; but, when the country is bare, some protection will be necessary. For this purpose *sheep-folds* are employed. These are sometimes fixed, being constructed of any convenient sort of light material, so as to enclose a space in proportion to the number of sheep, which is kept constantly well littered with some dry substance, such as stubble, refuse straw, dry sand, &c., during the time the sheep are folded and foddered in them, in order that as much manure may be raised as possible. In some cases, also, for the more perfect protection of the sheep, they have sheds all round them, under which the sheep may lie without injury from rain, snow, or any sort of moisture. These usually are termed standing folds, and are either formed about the homestead or on some dry rather elevated situation on the farms, having the bottom well laid with some sort of material that is capable of keeping the sheep dry and clean. *Sheep-houses* are slight wooden buildings usually made low for the sake of warmth in the winter, being mostly a third part longer than they are wide; they should

also be sufficiently large for the number of sheep they are to contain. The side should



be lined with boards, and the bottom be laid in an even manner with stone or some other material, that the litter may be well impregnated. The sides exposed to the sun should be lined with moveable hurdles, that when it shines the whole may be laid open, to give due refreshment and afford the sheep an opportunity of feeding upon the pasture wherein they stand. They should be well and securely covered with some sort of proper material upon the tops. They are sometimes fixed in particular situations; but in other cases, which is the more improved method, so constructed as to be capable of being removed as they may be wanted. *Sheep-pens* are the divisions made by the small moveable gates or hurdles which are set up to keep sheep in some particular spot. They are usually formed on a dry place about the corners where different enclosures of the pasture meet, so as to be convenient for the whole. Pens are useful for examining and selecting the sheep, being divided so as to contain about three dozen sheep each, as by this means they are always at the command of the shepherd for any purposes he may have in view. The bottoms should be firm and dry, so that the sheep may not be soiled. In placing hurdles it is usual to fence off as much food as the flock will consume in one week, then a similar piece is fenced off at the end of the first, the sheep still having access to that which is partially consumed, another similar piece at the same end is again added, and so on until a slip of the field is eaten off; this slip should be set out in the direction of the longest side, or rather the line of the ploughing, so that when one slip is eaten off, the

rains. During the time the sheep are consuming the root crops, more or less of other food should be supplied to them, the description and quantity being regulated by a variety of circumstances, which can only be determined by time, place, and season. Corn, oil-cake, linseed, hay, &c., &c., are occasionally given. Small frames called cages are used for supplying the hay, and the other food is given in troughs; a variety of ingenious racks and cages are made of wrought-iron, and well suited to the purpose. That represented in the engraving is a neat one of convenient form. The time for sheep-shearing will vary very much with the state of the animal and of the season. After a cold winter, and the animal having been neglected, the sheep will be ready at an early period, for the old coat will be loosened and easily removed. The operation should never be commenced until the old wool has separated from the skin, and a new coat of wool is springing up. The coldness or warmth of spring will also make a great difference. The usual time of shearing is about the middle of June, and the sheep-owner will very easily perceive when the fitting time has come. It is a bad practice to delay the shearing, for the old fleece will probably have separated, the fly will have longer time to do mischief, and the growth of the new fleece will have been stinted, or a portion of it will be cut away by the shears. A few days previous to shearing, the sheep should be washed. This is usually done in some convenient pool or running stream; the sheep are placed in a pen on the bank, and one by one plunged in. At least three persons should be in the water; the sheep is taken in hand by the first, and well sluiced and plunged about; another then takes it and does the same; the next is most likely the shepherd, and he examines it carefully, and washes off any matter that may have been left by the other washers. The stream must be hurdled or netted across, above and below, to prevent the sheep escaping up and down stream. When the sheep are thus thoroughly washed, they must be placed in a dry, clean, pasture until shearing. The common method of catching the sheep in order to lay it on its back to the horn, is by the hinder leg, drawing the animal backward with a crook to the adjacent shearing place; the hand holding the leg to be kept low; when at the place it is turned on its back, or the animal is moved bodily, or one hand placed on the neck and another behind, and in that manner walked along: the first or common mode is perhaps the best. Sheep fed on rich pastures, and fleshy, if handled roughly, are bruised, and the parts are liable to fatal mortifications. In performing the operation of shearing, the left side of the sheep is placed against the shearer's left leg, his left foot at the root of the sheep's tail, and his left knee at the sheep's left shoulder. The process commences with the shears at the crown of the sheep's head, with a straight cut along the loins, returning to the shoulder and working a circular shear around the off-side to the middle of the



plough may be immediately employed to turn in the manure and prevent its evaporating by heat, or being washed away by

belly; the off-houlder leg next; then the left hand holding the tail, a circular shear of the buttocks to the near hock of the sheep's hind leg; the two fore feet are next taken in the left hand, the sheep raised, and the shears set in at the breast, when the remaining part of the belly is sheared round to the near stile; lastly, the operator kneeling down on his right knee, and the sheep's neck being laid over his left thigh, he shears along the remaining side. The sheep is subject to a great variety of diseases, the most formidable, and by far the most destructive of which, is the *rot*. Many causes have been assigned for this disease, but it is conjecture rather than certainty. The treatment of rot is seldom successful unless when it is commenced early, or when the attack is of a mild nature; a total change of food is the first indication, and of that to a dry wholesome kind; all the former are as good as the meals of wheat, barley, oats, peas, beans, &c. Carrots are suitable mixed with these; broom, burnet, elder, and melilot, have also been recommended; but it is necessary to observe, that there is seldom any ventral effusion but in the latter stages of the complaint. As long as the liver is not wholly disorganized, the cure may be attained by a simple removal of the cause; salt acts in this way, and thus salt mashes are good; salt may also be given in the water. In the more advanced stages of the disease, when the liver has become materially affected, it is prudent to rub the belly of each sheep with half a drachm of mercurial ointment every other day for a week; giving also the following every morning:—watery tincture of aloes, half an ounce; decoction of willow bark, four ounces; nitric acid, twenty-five drops. *Foot-rot* is a disease most prevalent in luxuriant meadows, and in all soft grassy lands saturated with moisture. The treatment of this disease essentially consists in paring away all loose and detached horn. All fungous granulations must either be cut away, or destroyed by the muriate of antimony, and the foot well washed with a solution of chloride of lime. The muriate of antimony must then be lightly applied over the whole of the denuded surface. This must be repeated daily until the whole of the foot is covered with new horn. The diseased sheep must not be permitted to join his companions until the cure is complete, for it is a very infectious disease, and may easily spread through the whole flock. *Scab* is an eruptive disease of an inflammatory nature, and a red appearance. It is a very troublesome disease, common in spring and summer. Sheep thus affected must be bound and shorn as closely as possible, and then well washed with warm water. Infusions of tobacco, hellebore, or arsenic, have all been used with good effect. In aggravated cases, an ointment composed of one part of mercurial ointment and seven of lime must be procured, and such a quantity of it rubbed in on every second day as the diseased parts seem to require. Another good receipt is a decoction of tobacco and spirit of turpentine,

with a little soft soap and sulphur vivum. The only caution necessary to be given in the use of any of these remedies, is to take care that they be brought thoroughly in contact with every part of the skin of the affected sheep, lest any of the burrowed acari escape. All folds and sheds in which infected sheep have been confined, and all gates, posts, and other rubbing places, must undergo thorough purification. *Dysentery* is a disease commencing with violent discharges from the bowels of a green slimy mixture, which in progress of time becomes tinged with blood. *Diarrhoea* attacks young sheep, and is usually occasioned by too sudden a rush of grass in the spring, or from a sudden change from a scanty to an over-rich pasture. When such are the causes of diarrhoea, the mere change to a drier pasture will effect a cure. *Dysentery* attacks old sheep, and generally does not commence till June or July. The disease usually prevails in fouled pastures, and in seasons characterized by a peculiar state of the atmosphere, with regard to heat and moisture, a certain combination of which renders the disease fatal. In the treatment of this disease, bleeding is a proper remedy at an early stage; but if late, gentle purgatives alone must be used; Epsom salts or castor oil with twenty-five to thirty drops of laudanum will form a proper dose. *Trembling* is a disease caused by exposure to the cold and winds; a numbness and trembling seizing the body and limbs, owing to the heart being unable to send the circulation to the extremities. Copious bleeding in the first stage of the attack will often restore the balance of the circulation; but if the animal has been affected some time, it is often difficult to obtain a sufficient quantity of blood which has been thrown from the surface upon the heart, and other internal organs. In this state, the animal must be put into a tub of hot water at ninety-eight degrees, which will cause the blood to flow, and thus renew the action of the heart, and tend to restore the balance of the circulation. After a sufficient quantity of blood has been drawn, doses of Epsom salts dissolved in warm water, and followed with thin warm gruel, must be given till the bowels are freely opened. The prompt application of these remedies on the first appearance of the disease will in general be successful. *Inflammation of the brain* is ushered in by dulness and disinclination to move; but presently the eye brightens, and the animal attacks everything within its reach. Bleeding, physic, and low feeding will in most cases effect a cure. *Locked-jaw* is not an unfrequent disease among sheep. It commences with an involuntary spasmodic motion of the head, accompanied by grinding of the teeth, succeeded by rigidity of the jaws. The disease often runs its course in a little more than twelve hours. The principal cause is cold and wet. After an unusually cold night it is not uncommon to find several sheep lying lifeless. Bleeding, aperient medicine, an opiate given an hour after the physic, and also a warm bath, are the most likely means of cure.

Ophthalmia is a very frequent disease among sheep. If any inflammation of the eye is detected, that organ should be frequently bathed with a weak solution of Gowland's lotion, to which a few drops of laudanum have been added. *Brary* is an inflammatory disease to which those sheep in the highest condition are most subject. This disease may be excited by a variety of causes, such as drinking cold water in a heated state; any marked or sudden change of temperature; or feeding on soft damp grasses. The animal appears uneasy, often laying down and rising up, standing with its head down and its back raised, taking no food, but often drinking water; fever then ensues, when the pulse becomes strong and quick, respiration laborious and rapid, the skin hot and the wool clapped; the eyes are languid, watery, and half-closed; and the animal ceases to follow the flock. In this disease, the first and most effective remedy is prompt and copious bleeding from the jugular veins; this being effected, the constipation of the bowels must be removed; the best purgative for this purpose is Epsom salts, two ounces for a dose, dissolved in warm water, and followed by thin warm gruel. The best preventive of the disease in mountain sheep is skilful and attentive herding, by keeping the young sheep from fastening too much on succulent spots, and by causing them to graze regularly over every part of the pasture, being allowed, at the same time, perfect repose for rumination, undisturbed by the dog. Sheep are much infested in summer with flies. As a protection to the head against them, the simple cap or hood shown in the engraving, will be found effectual. It may be made of



stout linen, and fastened with four tapes tied crosswise under the chin, or of leather, and buckled at the same place. Leicester trips should not be without these caps in summer, especially when grazing near any woods; and as trips are addicted to butting each other, any skin that may be thereby abraded on the head will receive immediate and effectual protection from the air and the flies by the cap. Sheep are troubled with a small species of *bot*, which is supposed to deposit its eggs on the margin of the nostrils, and whenever it does so, the sheep lies down upon dusty bare spots, holding its head close to the ground. The warmth and humidity of the nostrils very soon bring the

eggs to maturity, and the larvæ find no difficulty in making their way. *Blow-flies* are dangerous tormentors of sheep. When the animals are struck by them, they almost constantly hang their heads, sometimes turning them on one side as if in the act of listening; shake the tail with a quick jerking motion; run rapidly from one place to another, and in so doing stop suddenly and stamp with the fore-feet. A shepherd ought to be able to detect sheep that have been struck by the fly the moment he enters the field. Dogs may also be trained to single out the diseased animals, and run up to them, as if to intimate that they should be caught. The sheep should be carefully observed one by one when the flies are active, and being gathered in a convenient part of the field, the suspected ones should be caught with the crook, and examined, and every maggot removed by the hand. As maggots are not killed by being thrown on the ground, they should be collected in some vessel and destroyed, either by being crushed with some hard substance or by having boiling water poured upon them. Should the maggots have broken into the skin, rubbing the part with a strong solution of corrosive sublimate, or a strong decoction of tobacco-liquor and spirit of tar, will check a further attack on that part; and should the part affected be larger than is seen between the shreds of the fleece, the wool should be removed with the shears, and the corrosive sublimate applied upon, and around, and rubbed into the wound. Should the wound, on healing, indicate a dryness of the skin, in consequence of the application of the corrosive sublimate, an ointment of tar and lard will soften it, and keep off the flies. *Ked* or *tick* is another tormentor of sheep. It penetrates the skin, and buries the anterior part of its body in the flesh or fat of the sheep, where it continues to subsist and grow. Its tough skin renders it difficult to be killed by pressure; and when its body is bisected by the shears, the buried part instantly emerges, runs about quickly, and at length dies. The following remedy will be found effectual in ridding the affected animal of this pest:—Take two pounds of black sulphur, half a pound of hellebore; mix them together, and sprinkle the sheep from the head to the tail, with a dredging-box; or, take half a pound of powdered white arsenic, and four pounds and a half of soft soap; beat these for a quarter of an hour, or until the arsenic is dissolved in five gallons of water. Add this to the water sufficient to dip fifty sheep.—See LAMBS, TO BREED AND REAR. Book:—Gardener's and Farmer's Reason Why.

SHEEP'S HEAD BROTH.—The sheep's head is hardly worth cooking in any other way than as broth. To make broth, get a fine head, and scald the wool off the same as the calf's head; then put it into a saucepan with a gallon of water, and let it boil gently for three hours; having put in with the head a carrot and turnip sliced, and an onion or two, the scum should be taken off five or six times, so as to get it perfectly free from grease; take out the

head, cut the meat from the bones into squares, and put them into the saucepan again with the liquor, leaving the turnips, carrots, and onions in also; season it with pepper and salt, add a little flour to thicken, and serve in basins with some toast cut into squares in the basins, and a little chopped parsley fresh. The scrag end of the neck, shank bones, or feet, will make broth as well as the head.

SHEEP'S PLUCK.—Boil the lights first, then chop them up, and put them to stew with a little broth or gravy, seasoning with pepper and salt. Thicken the gravy, and if not brown, add a little of the gravy from the frying-pan which, when the liver has been fried is made by adding some flour and water to the contents of the frying-pan. Fry the liver as for steaks or chops, then place the dish with the minced lights in the centre. The heart should be stuffed and roasted, to form a separate dish.

SHEEP'S TAILS.—When the sheep's tails have been stewed tender in stock, let them get cold; have some gretated bread crumbs and strew them over the tails; then moisten them with the yolk of egg. Then again shake crumbs over them; fry, and serve with fried parsley. The tails may in like manner be broiled, and served with some sauce piquante or sauce tartare.

SHEEP'S TONGUES.—Boil sheep's tongues in stock; when they are done enough, divide each in two and let them cool. Mix some fine herbs with butter, and season with pepper and spices; wrap up each piece after covering it with the seasoning in a buttered paper; broil or fry them, and serve them hot in the papers.

SHEEP'S TROTTERS.—Simmer six sheep's trotters, two blades of mace, a little cinnamoo, lemon-peel, a few hartshorn sbayings, and a little isinglass, in two quarts of water to one; when cold, take off the fat, and give nearly half a pint twice a day warming with it a little new milk,

SHEETS.—A portion of bedding of which a pair are ordinarily used; the top sheet is generally a coarser one than the bottom one, being made of linen and cotton respectively. Sheets should not be changed oftener than once a week, nor seldom less than a fortnight.

SHELLS, TO CLEAN AND REPAIR.—When shells are perforated by sea-worms, or when any other accidental circumstance occurs to deform a choice specimen, it is desirable to use some means to improve it. For this purpose, a cement may be made of fine whiting, flour, and gum; the knobs or crevices to be filled up with this composition, and allowed to dry; it should always be a little above the surface, and cautiously scraped down with a knife, when ridges or striæ can easily be imitated if necessary, with a file or graver. The parts thus mendend may be coloured with ordinary water-colours, and then brushed; or if on a smooth shell, polished with the palm of the hand, and afterwards rubbed over with Florence oil, which should be well dried off with a

piece of flannel. If this mode is judiciously managed, the blemish will not be discoverable. Many shells, when first obtained, are encrusted with extraneous matter; the best and safest means of removing this is, first to steep them in warm water, and then to scrape them with a knife or remove them with a graver. A little sand paper may also be used, but care must be taken not to scratch the shell. When as much of this crust has been removed as can be done with safety, recourse should be had to muriatic acid very much diluted with water; by applying this cautiously with a feather to the extraeuous matter, it will soon become decomposed. Two minutes at a time is as long as it can be safely applied, but one moment's application often has the desired effect. The shell should be immersed in cold water, and the parts well scrubbed with a nail-brush and soap. Should the crust be not entirely removed, this process may be repeated, but the greatest care is to be used not to allow the acid to touch the inside, as it will instantly remove the fine enamelled surface. After the corrosion, the shell may be brushed over with emery or tripoli by way of polish. This may be done in cases where the polished insides happen to be touched with the corrosive fluid; but in all instances where the places cleared by the acid are of a white or chalky appearance, they should be washed over with Florence oil, and then rubbed hard with a piece of flannel and a nail brush. This mode gives the shell the appearance of nature, and at the same time stops the action of the acid, should any remain in the shell, and is of great use in preserving it from decay.

SHELLS, TO POLISH.—This may be done either by hand labour or by varuishing: in both cases, all the rough parts must be well rubbed down with emery and water. If they are to be polished by hand (which is the best and most lasting way), after they have received two or three courses of emery, of different degrees of fineness, they must be finished with buff-leather, dressed with rottenstone and oil.

SHERBET.—Sherbet, as it is generally prepared, is in fact weak spirits and water. First clarify the sugar, that is bring it to a clear syrup in the following ways: To two pounds of loaf sugar allow a pint of spring water, and the white and shell of one egg well beaten. Break up the sugar in large lumps, and set it over the fire in a preserving pan or brass skillet, with three-quarters of the water and the egg. Stir till the sugar is dissolved and the syrup begins to get warm, but no longer; when it boils fast, pour in the remaining cold water, which will throw up the scum. When it again boils up, remove from the fire, and stand it aside to settle; then remove all scum, which place on a hair sieve or muslin strainer, but if the latter, do not squeeze it. What freely runs through is to be returned to the rest, which boils up once more, and again settle and skim. This quantity of sugar will be sufficient to sweeten from three to four gallons of sherbet, according as it is liked more or less sweet. To this, when

cold, may be added for flavouring one drachm or a drachm and a half of almond flavouring; bottle, cork close, and keep in a dry place. When the sherbet is to be made, to every quart of water allow six or eight moderate-sized sticks of rhubarb; if of the giant sort, three or four will be sufficient. Cut them up with a silver knife, boil them ten minutes, strain the boiling liquor on to the thin-shaved rind of a lemon, or if more convenient use pure essence of lemon; eight or ten drops will be sufficient. It may be added to the clarified sugar, of which four tablespoonfuls are to be stirred to the strained liquor. Let it stand five or six hours before using. The rhubarb may be sweetened and used for a tart.

S H E R R Y.—Wine-merchants distinguish several kinds of sherry, as pale and brown and there are various degrees of each. Sherry in general is of an amber colour, and when good it has a fine aromatic odour, with something of the agreeable bitterness of the peach kernel. When new it is harsh and fiery, and requires to be mellowed in the wood for four or five years. Sherry is much in favour in England, as being a light pleasant wine, and more suitable general drinking than any other. Amintellado sherry is highly esteemed, being, when genuine, entirely devoid of brandy, and equally free from acid.

S H E R R Y COBBLER.—Take some very fine and clean ice, break into small pieces, fill a tumbler to within an inch of the top, with it put a tablespoonful of plain syrup, capillaire, or any other flavour—some prefer strawberry—add the quarter of the zest of a lemon, and a few drops of the juice. Fill with sherry, stir it up, and let it stand for five or six minutes. Sip it gently through a straw.

S H I N G L E S.—A spreading inflammatory eruptive disease, generally attacking the trunk of the body, and preceded for two or three days by ordinary febrile symptoms, accompanied with a sense of scalding heat and tingling of the skin, and with sharp pains through the chest. The eruption consists of several red patches of an irregular form and at a little distance from each other, upon each of which there are numerous small elevations, which enlarge and become filled with a transparent fluid. These gradually increase in number, spreading in a straight line from the front to the spine, and after the fourth day, break and form a dark-coloured scab, which on falling off leaves a series of small pits. Shingles are most prevalent in the spring, and generally attack young people between the ages of fifteen and twenty. The treatment is purely constitutional, and should embrace mild laxatives, and a cooling fever mixture, such as is prescribed below. No application is needed to the rash itself, as that can only be expelled by the use of the subjoined pills and mixture. Take of

Compound rhubarb pill,
and compound colo-
cynth pill, of each . . . $\frac{1}{4}$ drachm.

Mix, and divide into twelve pills, one to be taken twice a day. Take of

Liquor of acetate of am-	
nmonia and camphor	
mixture, of each . . .	2 ounces
Spirits of nitre and ipec-	
cuangular wine, of each .	2 drachms
Water	1 $\frac{1}{2}$ ounce

Mix. Take a tablespoonful every four or five hours. At the same time the diet should be low, and when much nausea attends the first stage, an emetic may be taken advantageously.

S H O E S.—This article of wearing apparel as distinguished from boots, is best adapted for summer wear, or for those persons who have a great deal of walking. For the cleaning and preservation of shoes, see Boots.

S H O O T I N G.—See SPORTING.

S H O P - T A K I N G , D I R E C T I O N S F O R .—Persons who are about to take a place of business, will find it to their interest, previously to doing so, to be guided by the following directions. *Small Capitalists.* In the case of a person who has no intimate knowledge of any particular trade, but having a very small capital is about to embark it in the exchange of commodities for cash, in order to obtain an honest livelihood thereby. It is clear that unless such a person starts with proper precaution and judgment, the capital will be expended without adequate results; rent and taxes will accumulate, the stock will be dead or become deteriorated, and loss and ruin must follow. For the least absorption acting upon a small capital will soon dry up its source; and it is needless to picture the trouble that will accrue, when the mainspring of a tradesman's success abides by him no more. *Larger Capitalists.* The case of the larger capitalist can scarcely be considered an exception to the same rule. For it is probable that the larger capitalist, upon commencing a business, would sink more of his funds in a larger stock—would incur liability to a heavier rent; and the attendant taxes, the wages of assistants and servants, would be greater; and, therefore, if the return come not speedily, unfortunate consequences must sooner or later ensue. *Localities.* Large or small capitalists, should upon entering on a shop-keeping speculation, consider well the nature of the locality in which they propose to carry on trade, the number of the population, and the habits and wants of the people living in the immediate neighbourhood, also the extent to which they are already supplied with that class of goods the new adventurer proposes to offer them. *New Neighbourhoods.* There is a tendency among small capitalists to embark their fortunes in new neighbourhoods, with the expectation of making an early connection. Low rents, also, serve as an attraction to these localities; it is however a pretty well ascertained fact, that the majority of shopkeepers in a new neighbourhood almost always fail. The shops are generally entered upon at the very earliest

moment that the state of the locality will permit—even while the streets are unpaved, and while the roads are as rough and uneven as country lanes. The consequence is, that as the few inhabitants of these localities have frequent communication with adjacent towns, they, as a matter of habit or choice, supply their chief wants therefrom; and the shopkeeper in the locality depends for support upon the accidental custom which forgetfulness, the state of the weather, or other fortuitous circumstances allow. Thus it occurs that while the new district is becoming peopled, the funds of the small shopkeeper are gradually eaten up, and failure overtakes him just at the time when a more cautious speculator steps in to profit by the convection already formed, and to take advantage of the now improved condition of the locality. It is, therefore, desirable for the small capitalist rather to run the risk of a more expensive rent, in a well-peopled district, than to resort to places where the demand is slow and uncertain; for the welfare of a small shopkeeper depends entirely upon the frequency with his limited stock is cleared out and replaced by fresh supplies. *Goodwill and Fixtures.* One plau of entering upon a shop, is to pay a certain amount for what is termed the goodwill of the business; that is to say, the new-comer is supposed to stand in the same position and have like prospects as the person relinquishing the shop, and has a connection with its attendant profits all ready made to his hands; the extent of the trade done regulating the value of the goodwill, and in many cases it is customary to give a large sum in this way, inasmuch as the profits derivable show a liberal percentage on the amount thus invested. In purchasing a business under these conditions, it is necessary to exercise the greatest caution and discretion in order that the in-comer may not be disappointed or deceived. When a person wishes to dispose of the goodwill of his business, he frequently exaggerates the amount of his takings, and will even go so far as to fabricate books and other plausible evidences of a flourisbing trade; whilst under the fairest circumstances the out-goer naturally gives a high colour to matters, and reduces mere probabilities and contingencies to positive facts. When, ttherefore, a person is about to purchase the goodwill of a business, he should not content himself with an examination of the books, or the representations of the person who is about to dispose of the business, but he should judge for himself by watching the trade for a few days (if possible unobserved), by prevailing upon friends to do the same, and by noticing the characteristics of the neighbourhood. It must also be observed that some connections appertain to the shop, and other connections to the shopkeeper; in the former case, the trade may be transferred from one person to another without diminising; but in the latter case, from prejudice and predilection, and the excrise of personal like and dislike which it is impossible to control, the new-comer may find that the

old customers drop off and trade sensibly diminishes. In all cases, a clause should be inserted in the deed of purchase, that the outgoing tenant shall not open a shop in the same line of busiess within a certain distance of his former premises, thereby preventing him from weaning away the patrouage and custom from his successor. It would also be as well in such cases to retain a portion of the purchase-money, so as to meet any responsibility that may arise, as well as to exercise a wholesome restraint upon the outgoing tenant. With regard to fixtures, they are sometimes included in the goodwill, but it is always better to consider them as representing a distinct value, and to regard them as a separate item; if this be not done, it is probable that a great quantity of useless material may be purchased at an exorbitant price, to be afterwards sold at an enormous sacrifice, or to lie on the premises as worthless lumber. The fairer way is, for a respectable broker to be called in on either side, and any difference that may arise in their respective valuations to be mutually adjusted. Previously to this being done, however, the intending purchaser should claim the privilege of rejecting any articles of furniture or fittings which he may deem useless. This option is not always to be exercised; where the trade is a very good one and the profits large, the outgoing tenant takes up an independent position, and will listen to no accommodation; but in other cases, where moderate advantages exist, many privileges and immunitiess are to be secured by decision, firmness, and tact. *Nature of Articles sold.* When a person is about to invest a small capital as a shopkeeper, without having a precise knowledge of any particular branch of trade, and without having a predilection for one kind of business more than another, it becomes a question as to what class of goods he should stock his shop with, so as to ensure him the quickest return for his outlay. In taking this view of the case, it will be found that the necessities of life form the most reliable and readily saleable stock in trade. Thus people will become hungry and must have bread, which they have neither the time nor inclination to fetch from a distance; meat is also a daily want which must be supplied on the spot, and vegetables, unless easily obtainable, will in many cases not be purchased. Therefore, the baker, the butcher, the greengrocer, the beer-retailer, &c., are those who find their successess first established in new localities and recently-built shops. And not until these are doing well, should a shopkeeper venture on commencing business in such localities, with what may be termed the *superfluities of life.* *Manner and Address.* Success in business, especially with young beginners in a new neighbourhood, depends in a great measure upon the way in which the shopkeeper conducts himself towards his customers: a civil manner and obliging disposition are most essential under such conditions; they are certain to win their way, and to work a favourable impression

on behalf of the shopkeeper. On the other hand, a disobliging, pert, or sulky manner, will cause incalculable mischief, and if persisted in, must in nine cases out of ten result in failure. It is astonishing how much injury may be the consequence of a single word, look, or gesture, inadvertently indulged in under the influence of irritation or impatience. Such circumstances, trifling as they may appear, will rankle for months or years in the bosom of the offended customer, and will cause him to deal at another shop at considerable personal inconvenience, rather than he subjected to what he considers indifference or insult. Attention to business is another material ingredient of success. Persons have naturally greater confidence in a shop which is conducted under the owner's immediate supervision, than in one which is left entirely in the hands of subordinates. Not only is civility ensured, but the chances are that the purchaser will more readily obtain the article desired, and at better value for his money. *Method, Regularity, Punctuality.* The observance of these three qualities is most important; and whether the business be large or small, they should never be lost sight of. The keeping of books, accounts, &c., should be carried out on some settled and definite plan, no matter how primitive it may be, so that the bookkeeper may find it easy of reference, and that every transaction appears to speak for itself in a clear and straightforward manner. Method should also be observed in the keeping of stock, and chiefly establishing some system by which any article that is getting low may be ordered at once, so that a customer may not be told that they are "out of it," and thus drive that customer to another shop, to which he may possibly transfer the whole of his future patronage. Regularity chiefly consists in doing one thing at a time, and never beginning a second until the first is despatched. Much of the confusion, and many of the mistakes in business undoubtedly arise from the foolish custom of attempting to do several things at once, the consequence being that not one is properly performed, and an immense loss of time and labour is entailed in rectifying the errors resulting from this loose method of conducting business. That which appears to be the longest and most tedious process in the transaction of business, is in the majority of cases the most expeditious, and it is astonishing how much real labour may be performed in the course of the day when done in this orderly, quiet, and methodical manner. The advantages of punctuality and the evils attending the non-observance of it are patent to everybody. Nothing is more irritating to the man of business than to have his arrangements thrown out, and his plans disorganized, owing to the disregard of punctuality on the part of some other person; and no character can be more fatal to a tradesman than that of his being *sure not to keep his appointment when he has made one.* On the other hand, a person who observes his engagements to

the letter, and who can be relied upon with certainty is always held in high estimation and favourable regard. The fact makes itself felt that a man who is thus particular in keeping his word in slight matters, will be equally scrupulous in weightier affairs; and that, in short, he is actuated by a defined intention and a moral purpose to regard the convenience, the wishes, the feelings of others as well as his own. *Connection.* In provincial towns, and under sundry peculiar circumstances, "connection" has a great deal to do with the success of the shopkeeper. Thus, for instance, if a shopkeeper proposed to set up a rivalry against an old-established and respectable tradesman, he would act wisely to pause before he made the attempt. But if he felt confident that his own connection was sufficient to support him, then the objection to the venture might be overruled. Connections, however, must not be too implicitly relied upon. They are as a rule more exacting and less easily satisfied than the general public, and are open to the following special drawbacks:—Your "connection," of course, expects you to give credit. Your "connection" is surprised that you should be so importunate about your little account. Your "connection" reminds you of certain obligations that you are under. Your "connection" finds that your goods are neither better nor cheaper than those of any other tradesman. Your "connection" after a little while finds positive disparagement against your goods, comparing them with articles bought at another establishment by a friend. Your "connection" consequently goes over to that other establishment, too often forgetting to settle your little account, and when you venture to remonstrate, you lose your "connection." *Conneaction*, as applied to trade, is a term capable of being subdivided: thus there is the *Religious Connection*. These are naturally formed in small towns and villages where the instincts and habits of a man are known to his neighbours. But however much this may prevail, and whatever seeming advantage there may be attending it, a man should never seem to make a show of religion the means of worldly advancement; if he does so, he will assuredly fail. The truth will out at some time or the other, and he will be regarded as a black sheep; and having built up his expectations and regulated his expenditure with certain views of support, the moment that support is withdrawn down the whole superstructure will come. As with religion so with politics. An ephemeral political connection may be gained by the shopkeeper being guilty of some piece of time-serving, or disreputable traffic of opinion; but as a rule, he who discharges his duty as a good citizen consistently and conscientiously, will gain more permanent and lasting support, and will, at one and the same time, augment the profits of his business and enlarge the circle of his friends. *Treatment of Servants.* A shopkeeper may do himself a great deal of harm or of good by the manner in which he treats his servants. The true way is, by kind treat-

ment and adequate remuneration to endeavour to make those employed in your service feel conscious that your success is their own, and your advancement is theirs. By so doing, an identity of interests will be established, which of itself possesses the elements of success; besides, taking an every-day view of the matter, it must be understood that certain customers have a wish to be attended on by certain shop-assistants, and that when these leave one service and enter another they will follow them there.—Book: *The Shopkeeper's Guide*, 1s. 6d.

SHORT BISCUITS.—Half a pound of butter, half a pound of sifted sugar, one egg, a little ginger, and a few caraway-seeds, with as much flour as will make it into a paste; roll it out, and cut it into biscuits.

SHORT-BREAD.—Rub one pound of butter, and twelve ounces of finely-powdered loaf sugar into two pounds of flour with the hand, make it into a stiff paste with four eggs; roll out to double the thickness of a penny-piece, cut it into round or square cakes, pinch the edges, stick slices of candied-peel and some caraway comfits on the top, and bake them on iron plates in a warm oven.

SHORT-CAKES.—Rub half a pound of butter down into a pound of flour, and mix one egg, a quarter of a pound of sifted sugar, and as much milk as will make a paste. Roll this out thin, and cut out the cakes with any fancy shapes, or the top of a wine-glass; place on tin plates, strew over with sugar, or cover the top of each with isinglass, and bake for ten minutes.

SHOT-BELT.—When the shoulder shot-belt proves oppressive, it will be found convenient, and less burdensome, to have a

which being double, and the belt affording six or seven compartments, will afford storage for nearly thirty charges.

SHIREWSBURY CAKES.—Beat to a cream $\frac{1}{2}$ pound of fresh butter; add the same quantity of well-dried flour, a pound of sugar, finely powdered, an ounce and a half of caraway seeds, and six eggs well-beaten in a little orange-flower water; add, last of all, half a wineglassful of ratafia, and mix the whole thoroughly together; make it into a paste, roll it to the thickness of a five-shilling piece, cut it into shapes, and bake on floured tins.

Butter, 1lb.; flour, 1lb.; sugar, 1lb.; caraway seeds, $1\frac{1}{2}$ oz.; eggs, 6; orange-flower water, to flavour; ratafia, $\frac{1}{2}$ wineglassful.

SHIRIMPS, FRESH WATER.—Wherever these are found the weeds abound with them. Take plenty of this weed, and place it, shrimps and all, in a large wide-mouthed earthen jar. Just cover the weed with water, and tie a piece of cheese-cloth or something which will afford free ventilation over the top, and there is no doubt but they will travel a considerable distance. Of course the changing of the water a few times during the journey would promote the certainty of their arriving in good condition, as forty-eight hours is rather a long journey. Supposing them to arrive alive and healthy, it is better to keep them in some enclosed place for some time, where they could have fresh water, and keep it well supplied with fresh weed, until the stock had materially increased, so as to ensure a fair chance of their being finally introduced to the river in sufficient numbers to do well and increase. Some perforated zinc plates or fine wire-sieving let into the sides of a well-seasoned trough or box, and defended on the outside by something coarser, to prevent the choking up of the apertures, which, it is needless to say, must be kept clean and open, will answer for this purpose, if sunk in a tolerably clear and rapid part of the stream; and the stock may be kept up in the box to feed the river with.

SHIRIMPS, PRESERVATION OF.—If these are kept from one meal to another, before putting them on the table they should be washed in a slightly warm water, which will restore their original firmness, and render them easy to separate from the shells. When they are kept until at all tainted, they are very unwholesome, and should be thrown away.

SHRIMP PIE.—Pick a quart of shrimps, if they are salt, season them with only mace and a clove or two. Mince two or three anchovies, mix these with spice, and then season the shrimps. Put some butter at the bottom of the dish, and cover the shrimps with a glass of sharp white wine. The paste must be light and thin. They do not take long baking.

SHRIMP SAUCE.—Pick half a pint of shrimps, and mix them in a saucepan with as much melted butter (brought to the thickness of cream) as you may require, and



belt affixed to the waist as here represented, with numerous partitions arranged along it. Into each of these a charge may be thrust,

a teaspoonful of essence of anchovies. For a family since the heads and skins should be boiled up in a separate sauceman, and the liquor which is strained from them mixed with the butter; but as it is apt to give too strong a flavour, if you wish to make a delicate sauce you had better not use it.

SHUTTERS. — Appendages of windows employed for the purposes of security, and for excluding light. The wooden shutter ordinarily used having been found extremely insecure, a new kind made of iron lath has been recently introduced. These are also raised and lowered upon a simple and convenient plan, and have the advantage of being perfectly impenetrable.

SIBERIAN CRABS. — Make a rich syrup with sugar, the juice and rinds of lemons, cloves, and a little brandy. A little red currant jelly improves the colour. When it boils, throw in the fruit, which must be quite ripe. Let it boil for a few minutes, and take it up, and let it cool. Boil again, and continue doing so until the crabs become quite soft. They must not be left long on the fire, or else the skins would break.

SICK CHAMBER, MANAGEMENT OF. — The room in which a sick person is confined should be of considerable size, lofty, and furnished with a fire-place. Well-ventilated rooms are in all cases of illness indispensable; yet ventilation should be so regulated that no current of air should pass immediately over the patient's bed or chair. It may always be supposed that draughts of air prevail in the direction of the fire-place, from any window or door; and hence, in such situations, the invalid should not be permitted either to lie or sit. In cases of fever especially, the ventilation of the sick-chamber demands attention, and will most materially expedite convalescence. As a general rule, the temperature of the sick-room should not be below sixty degrees of Fahrenheit. The kind of bedding of invalids is a subject of importance to their comfort. In some cases a well-stuffed feather bed is to be preferred to mattresses, which for fever or paralytic patients are not sufficiently yielding. By the constant pressure of any part of the body on the unyielding surface, the part becomes inflamed and a sore ensues. A feather-bed may, however, be too soft, and become easily disarranged; the patient may be too ill to admit of the bed being made daily, and in such cases it becomes lumpy and extremely irritating. The spring mattresses are the most unobjectionable of any; they give way easily to pressure, and spring up by means of their elastic stuffings, as soon as the pressure is removed. They require no daily making, and afford the patient much assistance from their elasticity, in turning from one side to the other. The water, or Arnott bed, is also another valuable contrivance for mitigating the sufferings and weariness of the victims to lingering, yet fatal diseases. In using it, the head and shoulders of the patient must be supported upon some fixed substance, otherwise, being heavier than the limb, the

inclination of the body will be the reverse of that which is natural. On whatever bed a patient lies, it should be large enough to admit of his being removed from one side to the other, to admit of changes in the bed-linen, as well as to afford relief in posture to the sufferer; or if the bed be small, a second bed in the room answers the same ends, as well as admitting of daily exposure, for a short period, of the bed or bedding to the air of the room, when it may be again shaken well, and made and prepared for the invalid, to whom, when again carried, it will afford considerable relief and refreshment. One important thing in the management of a sick chamber is to keep it as still as possible; the least noise jars upon the acute sensibilities of the sufferer, and these disturbances, if frequently repeated, are liable to produce the worst consequences. To ensure perfect stillness, any defect of the furniture, such as the creaking of chairs, the rattling of boards, the shaking of windows, and the slamming of doors, should be at once remedied. The same precautions should be exercised when performing any little office, as poking the fire, filling and emptying vessels, moving articles from one place to another, all of which can with care be performed so as to be almost inaudible to the sick person. The furniture, hangings, and paper of a sick chamber should be of a cheerful cast without being too glaring and conspicuous. The bed curtains especially, which meet the patient's eye the most, should be of a dark green colour, a shade most grateful to the sight. Every article of furniture that is likely to afford comfort and relief to the sufferer, should when possible be obtained. These need not in every case be purchased, but may be hired at a comparatively trifling cost. Much good may be effected by placing before a patient some pleasing and grateful object, thus a bouquet of fresh flowers, placed upon the table in the invalid's view is calculated to exercise a beneficial effect upon his susceptible and sensitive system. The sight of old and dear friends is also calculated to aid recovery, and if these visits can be managed impromptu as it were, without any parade or bustle, so much the better. When the patient is capable of sitting up, a seat contrived for him near the window, so that he may look out without fatiguing himself, will be very acceptable to him; and when he gets better still, and is just able to move about, the arm of a friend on either side to assist his steps across the chamber will be of material assistance and comfort to him. In a word, nothing that humanity can dictate, or experience suggest, should be disregarded in the management of the sick chamber; and no time or labour can be ill-bestowed in bringing to bear the numerous kind offices which the sick demand at our hands, and which it may be our lot one day to require. — See INVALID FURNITURE, NURSE FOR THE SICK, &c.

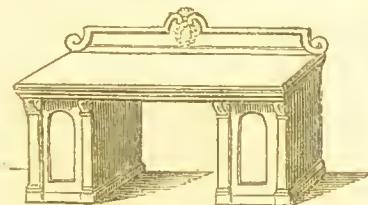
SICKLE. — A well-known agricultural implement, the varieties of which are confined to two very distinct forms, the toothed and the smooth-edged sickles. In the

formation of the sickle, the curvature of the blade is a point of great importance; for there is a certain curvature that will give to the muscles of the right arm the least possible cause for exertion, while there are other curves that if given to the blade of

the sickle, would cause the reaper to expend a great amount of unnecessary exertion in the arm, and a consequent unnecessary fatigue wou'd follow.—See SCYTHE.

SIDE, PAIN IN, REMEDY FOR.—At bed-time take a fresh cabbage-leaf, hold it near the fire till quite warm, and then apply it to the affected part, binding it tight with a cloth round the body; let it remain for twelve hours or more, when it will generally be found to have removed the pain. If not entirely removed, it will be well to repeat the application of a fresh leaf, allowing it to remain on the same time as the first.

SIDEBOARD.—One of the most useful articles of turniture in a household, and particularly so when the room in which it is placed is destitute of a cupboard. The size of the sideboard should be proportioned to the dimensions of the room, otherwise it will by its extraordinary capacity dwarf the other articles of furniture by which it is surrounded. Sideboards are generally made of mahogany. The most convenient kind is that seen in the annexed figure, called a pedestal sideboard, having on each side

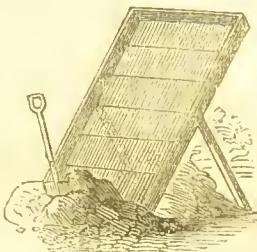


doors enclosing shelves or drawers for holding plate, liquors, and other articles; at the bottom may be a deep drawer with partitions. A wine-cooler may also be placed in the centre vacancy.

SIEVE.—A utensil employed in the various operations of the kitchen and the laboratory. They are variously made of wire-cloth, hair-cloth, or of open lawn or muslin. Pierced zinc is also used, and on emergencies, parchment strained over a frame and pierced with numerous holes with a hot iron answers tolerably well. In using sieves, the operation will be expedited by stirring the contents from time to time, so as to prevent the outlets from becoming clogged. When they are done with, they should be thoroughly washed and hung up

to drain and dry; it will be also better to have two or three sieves in use, to prevent one mixture being impregnated with the disagreeable ingredients of a preceding one.

SIFTER.—A contrivance used for agricultural and horticultural purposes for fining or sorting earths, gravel, tanner's bark, &c. The sifter shown in the accompanying engraving consists of a wire frame with a jointed fulcrum, by which it can be placed



sloping to any required degree; the soil or other material requires to be dry, well broken, and then thrown loosely on the upper part of the screen. In gravel-sifters the wires are placed wider, according to the use to which the gravel is to be applied. In general, a quarter of an inch is the width for earth, and half an inch for garden gravel; but for gravel used in the highways, one inch is not too wide for excluding small stuff, nor two inches too narrow for admitting the small stones to be used. A mould-sifter, used for sifting mould for small pots, is a piece of cloth of wire firmly attached to a circular rim, the holes in which need not be above a quarter of an inch in diameter. Sifters are also required in gardueing for cleaning seeds; and wooden sifters of different kinds, for airing or keeping fruit.

SIGHT, PRESERVATION OF.—Take care of your eyes. Most people may preserve good sight through their whole lives by taking care of it; and yet most people forfeit it by neglecting it. Among the rules for keeping the eyes sound and healthy, the following are some of the most important:—Avoid glaring lights; avoid abrupt, violent transitions from light to darkness, and from heat to cold; keep the eyes clean; wash them with lukewarm water. According to the old English proverb, "fasting spittle is good for sore eyes." Most animals heal their wounds by licking them with their tongues, for the saliva has great healing virtues; therefore, if you suffer from irritation of the eyes, moisten your finger with your saliva and gently apply it to the eyes. But do not rub or press your eyes at all roughly, unless you wish to injure them. Never allow dust or hairs to remain in your eyes; but if they get in, fill the eyes with lukewarm water, so as to set the encumbrance afloat, and gently draw your fingers across the eyes in the direction of the nose until the offending substances slip out at the corners. Do not put poultices over your eyes, lest, in attempting thus to draw out

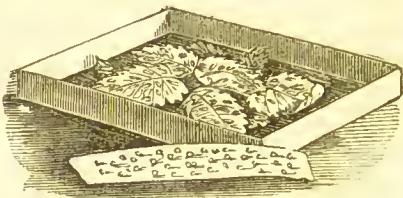
the inflammatory disease, you draw out eyes and all. In order to preserve your eyesight preserve your general health by air, exercise and temperance, and medicine when you require it. Accustom your eyes to moderate and varied exercise, but never strain them by too long persevering over a work which they are weary of. Weak eyes are more benefited by green shade, or blue or green spectacles, or railway goggles (made of wire) and gauze, than by thick bandages. Avoid reading small print after dinner, especially if your dinner has been of the epicurean order, and do not read much by candle light, nor sew black cloths. As candles are apt to flare up and produce an undulating glare, use a ground-glass or oiled paper lamp instead. Avoid exposing your eyes to an artificial draught of air. Do not roast your eyes by sitting too much before a bright fire. If your usual position exposes one eye more than another to a glare of light, protect the exposed eye by a green shade. Use double eye-glasses when you require them rather than single eye-glasses or even spectacles, and take care that their focus precisely suits your own. Choose apartments that are well and evenly lighted. Accustom your eyes to the natural influence of the atmosphere and solar light; those who live in dark and close rooms will produce a morbid weakness of the optic nerve. Beware of strong reflected lights, especially those from white walls, chalks, rock, for white hardly absorbs any ray, whereas the other colours absorb many. Accustom your eyes to view varied objects at near and remote distances, as by this means you will preserve their free play and flexibility; whereas if you direct your sight too exclusively to near objects, you will become near-sighted; let the colour papers of your rooms be rather mild and soft than brilliant or garish. View objects in oblique lights so as avoid their direct reflections, which often dazzle the eyes. The best colour for spectacles is pale blue. Do not let glaring lights fall on the paper while you read or write. Keep the eyes cool by temperance, and the feet warm by exercise. When the eyes are simply weak, a tonic wash, such as alum-water or green tea and brandy-water, is beneficial. When irritable, use weak goulard water, and produce defluxion from the nose by taking snuff.

SILK, TO CLEAN.—Grate two or three large potatoes, add to them a pint of cold water, let them stand a short time, and pour off the liquid clear; or strain it through a sieve, when it will be fit for use. Lay the silk on a flat surface, and apply the liquid with a clean sponge till the dirt is well separated. Dip each piece in a pail of clean water, and hang up to dry without wringing. Iron whilst damp, on the wrong side. Should the silk be of more than one colour, it is desirable to wet a small piece first, lest the dress should be spoiled by moisture causing the colours to run; but for self-coloured silks, the direction is an excellent one, and satinettes, even of light colours if not greased or stained, make up again nearly equal to new.

SILK, TO REMOVE GREASE FROM.—Upon a deal table lay a piece of woollen cloth or baize, upon which lay smoothly the part stained, with the right side downwards. Having spread a piece of brown paper on the top, apply a flat-iron just hot enough to scorch the paper. About five or eight seconds is usually sufficient. Then rub the stained part briskly with a piece of cap paper.

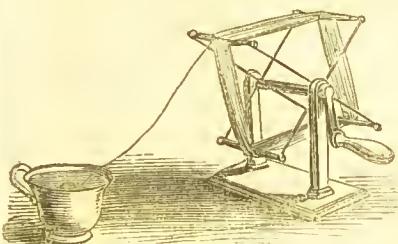
SILK, USES OF.—Silk is an agreeable and healthy material. Used in dress, it retains the electricity of our bodies; in the drapery of our rooms and furniture covers, it reflects the sunbeams, giving them a quicker brilliancy, and it heightens colours with a charming light. It possesses a cheerfulness of which the dull surfaces of wool and linen are destitute. It promotes cleanliness, and will not readily imbibe dirt. Its continually growing use by man, accordingly, is beneficial in many ways. Grace and beauty even owe something to silk.

SILK-WORMS, TO REAR.—The eggs of the silkworm are generally brought on slips of paper just as they were laid by the moth. They should be obtained about the latter end of April, and placed in trays made of stout cartridge or thin pasteboard of the form seen in the engraving, and this should



be covered over with thin gauze. The trays should have some young lettuce-leaves placed at the bottom, and may then be placed in a window facing the south, where they are fully exposed to the rays of the sun; there they should remain undisturbed till they begin to hatch, and as the young worms appear they should be removed into other trays, and fed with mulberry-leaves. The temperature should be kept at from sixty-six to seventy degrees, and the room should be well ventilated, and should be kept equally free from damp or too much dryness. The silkworms should be kept scrupulously clean, dead leaves and refuse cleared carefully away, and in lifting them from one tray to another they should not be touched by the fingers, but moved by threads of cotton passed under their bodies, or with a camel-hair pencil. The caterpillar has four moltings, which may be all accomplished in the period of four days each, if the heat of the room be increased from ninety-five to one hundred degrees. When the heat is regulated to a lower standard, the first molting takes place on the fourth or fifth day after hatching, the second in four days more, the third in five or six days more, and the last in about eight days. Ten days more are

required after this moulting, so that in about thirty-two days after hatching the caterpillar has attained its full size. During all these changes the worm requires the nicest attention. At the end of the time mentioned above, the worm changes to a clear pink or flesh colour, and appears semi-transparent; they refuse their food, become restless, and prepare to spin or form their cocoon. At this time care should be taken to raise the sides of the trays in which they are kept, or the worms will climb over and so be lost or destroyed. What is called the cocoon nest should now be prepared, by forming a piece of writing-paper into the shape of a folded sugar paper. A number of these should be prepared, and affixed to the wall or in a warm aspect with their pointed ends downwards, and into each one a single worm should be placed when it quits its food and seems ready to spin; it will then dispose its web in such a manner as to leave a cavity within. Inside of this cocoon, or ball of silk, the worm passes into its chrysalis state. It remains thus for about fifteen days, and then comes forth in the form of a moth. In escaping from the cocoon, it will, if unchecked, destroy a portion of the silk. To prevent this, the silk must be wound off previous to the egress of the moth. When by taking up the cocoon it is found that the caterpillar has passed into the aurelia, or grub state, which may easily be known by shaking it, as then the aurelia, from its harder texture and being slrunken in size, will be heard to rattle—this is the time to wind off the silk. The cocoon is placed in a cup of warm water after the loose outward silk has been removed, and then an end



being taken, the whole continuous filament may be wound off on a piece of card. When the silk is wound off, the aurelia appears, and being put in a case by itself, it remains motionless for about twenty days, when suddenly it presents itself in the appearance of a pale yellow moth, with wings which seem scarcely adapted for flight. It crawls heavily about the place where it has been hatched, having a slight tremor in its wings, and eats nothing; the male speedily dies; the females hover about awhile, and lay their eggs on the slips of paper presented to them for that purpose, and then perish. The food upon which silk-worms thrive the best, and from which the best silk is produced, will be found to be the leaves of the mulberry tree. The best mulberry leaf of any species is that which is called the double

leaf; it is small, not very succulent, of a dark green, shining, and contains little water, which may be easily ascertained in drying some of them. The greatest care should be taken that the leaf is not in a state of heat or fermentation, whether just picked or when kept, as in this state the nutritive substance of the leaf is deteriorated. The leaves ought not to remain long compressed in the sacks or baskets in which they are gathered. The leaves may easily be kept two or three days in cool, moist, sheltered places, such as cellars and ground-floor rooms, care being taken not to heap them up too much, and now and then turning them to air them. Silk-worms are subject to various diseases; one of these is the *scarlet*, so called from the more or less dark red colour which the skin of the silk-worm assumes when issuing, or immediately after issuing from the egg. The worms attacked by this disorder appear cramped, stupefied, and suffocated; their rings dry up, and the red colour becomes ashy and white. This disorder does not always kill the worm in the first moulting, nor in the second; and sometimes they do not die until after the fourth moulting. When they live so long, it becomes more difficult to distinguish, as the red colour assumes a less dark and remarkable hue, and they cannot so easily be separated from those that are healthy, and might be mistaken by the most practised eye. When this disease is detected, the safest plan is to remove the infected worms into a separate receptacle, and there tend them until they recover their natural state. Another disease is known as the *yellow*. When thus attacked, the head of the worm swells; the skin is drawn tight over the rings, and slimes as if varnished; the rings swell; and the worm voids a yellow liquid, which may be seen on the leaves. The moment any worms appear to be attacked by this disease, they should be carefully examined, and where any doubt exists, they should be removed into separate places, and carefully tended until restored. As to those that are positively attacked by this disease, there is no expedient but throwing them away, or safer still, burying them, as that disease is known as the *glove*. Worms attacked by this disorder feed like the others, and grow in length exactly in the same proportion, but not in thickness. The disease is perceptible by the colour of the worm, which first appears of a clear red, and then changes to dirty white. If attentively observed, it will be seen to drop a sort of viscous humour from the silk-drawing tubes or spinners; and its body will also present a transparent or glowy appearance. The moment these are discovered, they must be removed.

SILVER.—A metal which, not being oxidized by the ordinary means, is perfectly harmless when made into vessels for preparing food. Also, not being acted on by the acetic acid, as iron is, it is suitable for cutting fruit, &c.

SILVER, TO CLEAN.—Silver should be washed with a sponge and warm soapsuds every day after using, and wiped dry with a clean soft towel.

SILVER, TO REMOVE INK STAINS FROM.—The tops and other portions of silver inkstands frequently become deeply discoloured with ink, which is difficult to remove by ordinary means. It may, however be completely eradicated by making a little chloride of lime into a paste with water, and rubbing it upon the stains. Chloride of lime has been mis-named "The General Bleacher," but it is a foul enemy to all metallic substances.

SIMNEL, TO MAKE.—One pound of flour, quarter of a pound of butter, quarter of a pound of lump sugar, one pound of currants, two ounces of candied lemon, a quarter of an ounce of carbonate of soda mixed with an egg, and a little milk; to be put in a tin mould and baked till enough.

SINK.—A provision made for the scullery and wash-house, and any other department of the household where needed. They are best hollowed out of a single piece of stone as in *fig. 1*, but are likewise made of wood lined with lead or zinc. It should be

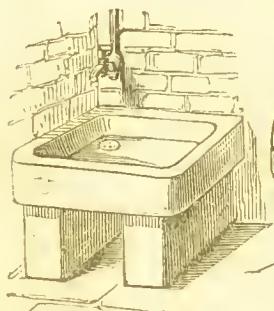


Fig. 1.

Fig. 2.

placed if possible in a good light, should be supplied by a tap with cold water, and if practicable with warm water also. The waste pipe should pass below into a drain, and there should be a hell stench-trap to prevent any unpleasant smell arising. The butler's pantry should likewise contain a sink placed in the corner, as in *fig. 2*; also one in the servants' hall, and if this is well furnished with a stop-cock and plug, it might serve occasionally for washing hands, &c. Sinks frequently become stopped up from neglect, and carelessly throwing down articles which cannot find a free passage down the pipe; a little caution may prevent this inconvenience and attendant expense. Sinks should be cleansed from time to time by setting the tap running for a few minutes, and so washing them out.

SIPPET PUDDING.—Cut a small loaf into extremely thin slices, and place a layer of them at the bottom of a dish, then a layer of marrow or beef suet, a layer of currants, and a layer of bread again, and so on till the dish is filled; mix four eggs well beaten with a quart of cream, a nutmeg, a quarter of a pound of sugar, and pour over it; set it in an oven, and bake it for half an hour.

SITUATION, TO OBTAIN.—The term situation is applied more especially to that class of employment given in offices, warehouses, shops, &c.; and it is generally expected that a person applying to fill up a vacancy has been accustomed to that particular branch of employment. The best way, therefore, of obtaining a situation is, to apply at those establishments in the same line of commerce as the applicant has been accustomed to.—See ADVERTISEMENT, APPOINTMENT, EMPLOYMENT, &c.

SIZE.—A kind of soft glue made from skins, and which may be produced by boiling rabbit-skins, parchment, old gloves, &c., for some hours, then dissolving, straining, and again boiling to a jelly-like consistence. To make size for artists, dissolve over the fire in a pint of water, four ounces of Flanders glue, and four ounces of white soap; then add two ounces of powdered alum; stir the whole and leave it to cool.

SKATE BOILED.—The fish having been previously skinned, the flesh cut into slips about an inch wide, and then immersed in salt and water for four or five hours, the pieces should be rolled, tied with a piece of string and boiled for about twenty minutes. The thinner parts not requiring so long, should not be put in until a short time after the water boils. Anchovy and butter sauce, or crab sauce should be served with it.

SKATE FRIED.—Prepare the fish as directed for boiled skate. Dip well in egg and bread crumbs, and fry carefully in plenty of dripping. Garnish with fried parsley, and serve with crab sauce, anchovy and butter sauce, soy or ketchup.

SKATING.—In this exercise, beginners should make their first attempt upon ice that is neither too smooth nor too rough. It is

important in the first instance, to see that the skates are firmly fixed on, which may be ascertained by a few movements of the feet prior to commencing skating. For



skates, the young beginner should kneel down and fasten the skates on one foot first, as in *fig. 1*. There are different kinds of skates, the two chief being the fluted and the plain. The fluted are the best for young beginners who can scarcely keep their footing, and who can travel over only a small surface of ice, because the groove or flute of the skate bites into the ice and obtains a certain hold, just as the point of a knife does in soft wood. But for rapid skaters the fluted skates are not suitable, as the grooves are apt to become filled with loose ice, and thus throw the wearer. In starting, strike out slowly with the right foot, bending a little forward, and learning upon the inner edge of the skate.

When the effect of the first step is lessening, strike out with the other foot, throwing your weight upon it gently, and again bearing on the inner edge of the skate. Fig. 2 shows the position to be taken at starting, and fig. 3 indicates the position into which the body is to be thrown when



Fig. 2.



Fig. 3.

the skater desires to stop. The toes are to be raised, the body inclined gradually forward, and the arms employed to steady the body. On large pieces of ice which are much frequented, the beginner will have no difficulty in finding a person to instruct him, but where this cannot be obtained the



Fig. 4.

aid of a skilful friend, as in fig. 4, will be of much service. The novice in skating should content himself with plain or straight skating, before he attempts to form figures, and he should learn to use both sides of his skates. The hands are essential to aid the movements of the body, and impart grace to them. The right hand should be held towards the head in skating on the outside edge of the left skate, and the left hand should

be raised when skating on the right outside edge, as represented in fig. 5 and fig. 6. The



Fig. 5.



Fig. 6.

most difficult movement is that of advancing by crossing the feet alternately, and throwing the body in a leaning position to the opposite side. This is one of the most graceful and agreeable movements in skating, and can only be accomplished after the learner has acquired some proficiency. Another motion called the "salute" is somewhat difficult. There is the salute in a curved line, and also in the straight line. That in the straight line is the most difficult. The salute in a right line is accomplished by, after having well struck out, throwing the feet in a horizontal line, and placing the arms in the position indicated at fig. 2. To perform the salute in a curved line, place the feet in a similar position, but so that the skates may describe the lines of a curve, and place the arms in the position indicated at fig. 7. To describe circles and



Fig. 7.

Fig. 8.

curved figures is the chief accomplishment of the skater. The best way is to select a good piece of ice, in the centre of which a small object, a piece of stone or bit of broken ice is lying. Take a run proportionate to the number of circles you wish to

accomplish. To form a curve on the outside edge, strike out on that edge, and balance the body so as to turn in a curve round the adopted centre. Turn your head towards the centre, and elevate the outer arm, to guide the motions of the body, as in fig. 8. To perform a curve on the inside edge, you must, as in the former instance, select some object to indicate the centre, and, taking a sufficient run, strike out in the inner edge. The head and body should be in pretty nearly the position indicated in fig. 8; but the leg on which you are standing should be kept straight. The other leg should

be held stiffly, with the suspended foot about eighteen inches from the other, fig. 9. Stopping in the formation of curves, circles, &c., is effected as in ordinary stoppings, as already explained, but it is considered more graceful to piroquette, by turning quickly round, and throwing the foot which is free over that

on which you

are skating. In skating backwards, the head and body should be inclined forward, and the feet struck out backwards, the heel of the skate being slightly raised. The feet being occasionally brought together will steady the movements and give confidence. Fig. 10 illustrates the position assumed in

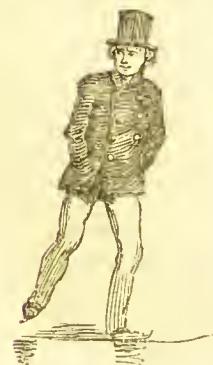


Fig. 9.



Fig. 11.

skating backwards. Backward circles can only be performed by persons of some experience. Fig. 11 indicates the position in making backward movements, fig. 12 and fig. 13 indicates the variations of those positions. In skating backwards, the

oblique stop is frequently adopted. It is accomplished by setting down the raised foot in an oblique direction, and stiffening the leg. This may be done with either foot. Turning round is effected by bringing one heel behind the other, and giving the body a twist in harmony with the position of the feet. The fig. 8 is effected by crossing the legs, and striking from the outside. It is accomplished by forming a perfect circle with one foot, then crossing the legs and forming the other circle. The fig. 3 is formed by striking out on the inner edge backwards, and gradually inclining sideways. Other figures which may be formed are the spiral, the kite, the fish, the oval, the maze, the lover's knot, &c., &c. The following precautions should be attended to in skating. Never venture on the ice until you are certain that it is able to support your weight; and

Fig. 12.

Fig. 13.

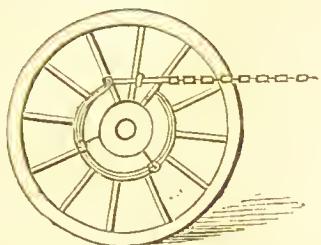


Fig. 13.

Fig. 14.

avoid the parts where numbers of people congregate. Select those places for skating where the water is not very deep; keep a sharp look-out for loose objects lying upon the ice, so that you may not be tripped up. If you are unlucky enough to fall in where the water is deep, spread out your arms over the broken ice, and keep as still as possible, waiting for assistance. For skating, the clothes should fit rather closely without being too tight. Long skirted coats and loose trousers will be found very inconvenient.

SKID.—An implement used for attaching to the hind-wheel of a vehicle when about to proceed down hill, with a view of regulating its momentum. No carriage or other vehicle should be without this convenience, as it is rarely applied, is never in the way, and prevents accidents and damage. An implement acting on the same principle as



the skid, and known as a stop-drag, consists of five or more pieces of wood, united on the outside by a strong jointed iron hoop, the wood pressing on the nave of the wheel. The annexed figure shows a wheel on a declivity, the chain drawn tight by the pressure of the breeching on the horse: the brake closely surrounding the nave, and forming an effectual drag.

SKIN, PRESERVATION OF.—The important functions vested in the skin of the human body, sufficiently indicate the necessity of keeping it in a state of cleanliness and freedom from obstruction. This is best accomplished by frequently bathing the body in cold fresh water, and by rubbing it briskly afterwards with a rough towel or the flesh brushes. A periodical change of under-clothing is also essential. With regard to the soap used in ablutions, the plain yellow sort is the best, and as a general rule all scented and fancy soaps should be avoided. By the same rule, washes, powders, lotions, &c., are not to be recommended; and when the skin does not present a healthy appearance, the better way is, instead of having recourse to such nostrums, to observe ordinary care in diet and regimen, and an improvement is certain to take place.—See ABLUTION; BATHING; FACE, AFFECTIONS OF; FLESH BRUSHES; TOWEL, &c.

SKINS, TO PREPARE.—The ordinary mode practised by tanners and furriers in the preparations of skins, with the wool or hair left on the outside, is to soak them for a short time in water to cleanse and soften them, and afterwards to thin them inside by scraping, if they require it. They are then placed for three or four days in a bath, made by mixing two pounds of bran in one gallon of water, the whole quantity being of course regulated by the number of skins to be soaked. Next, a paste made with one pound of alum and three ounces of common salt moistened with water and worked together, is spread on the inside of the skin, and left for about eighteen hours, when they are hung up to dry with the fleece or hair outermost, and if possible in the sun. After

this the inside is smoothed with pumice-stone, and sometimes a warm iron is passed over it, and then with a switching or brushing of the outside the operation is complete.

SKINS, TO PREPARE WITH WOOL ON.—Pulverize and mix well together a spoonful of alum and two of saltpetre; after sprinkling the powder on the flesh side of the skin, lay the two flesh sides together, leaving the wool outside; fold up as dry as possible, and hang in a dry place. In two or three days take it down and scrape it with a blunt knife till clean and supple; this completes the process. Other skins with fur or hair on may be cured the same way.

SKULL, FRACTURE OF.—This is an accident that may occur to any of the six bones that properly constitute the skull-cap, as it is called, or the head proper; yet some of these, from their remarkable thickness and situation, require so large a degree of force to fracture them, that they may almost be regarded as out of the category of accidents of this nature. The bones most exposed and liable to be broken, are the frontal and parietal, or the forehead bone and those side ones that form above the temple the dome and walls of the cranium. Nature has so admirably constructed the human head by building it of many pieces, each with a kind of wall or neutral demarcation between it and its neighbour, that an injury inflicted on one bone, or in plainer words, a crack, can in general extend no further than the bone injured, this line of demarcation checking the progress of the injury, and stopping it from extending to the next; as in a window, the stiles of the framework prevent the crack of one pane running into another, which, if the casement had no demarcation, would involve the injury of the entire sheet of glass. These separating media are called "sutures," and are the seams or joints by which the bones are dove-tailed or attached to each other, and but for which a fracture inflicted on one bone would spread all over the skull. Fractures of the skull are either simple, which is in reality like a crack in glass, and which with repose and ordinary care unite and heal of themselves; or they are compound, attended with laceration of the scalp, depression of a part of the bone injured, with diverging lines of fracture extending from the indented portion. Such accidents are the result of a great force, as a blow from a hammer; and as the depressed portion presses on the brain, and produces total insensibility, the consequences are serious. To restore consciousness, remove the dangerous pressure from the brain, and give the patient a chance of life; it is necessary to remove or elevate the depressed bone; but as this is purely a surgical operation, and can only be effected by skillful hands, it will be only needful here to observe that this is achieved by removing, through the aid of a small circular saw, like the top of a patent corkscrew, a piece of the indented bone, and with a lever elevating into its proper place the remainder; this operation is called *trepahing* or *trepanning*. The moment

the pressure is removed the patient opens his eyes and becomes conscious, when ordinary care, with adventitious aids, most frequently restores the sufferer to health.

SLEEP, NATURE AND PROPERTIES OF.—This state of being may be defined as that condition of natural consciousness in which the involuntary powers are in a state of insensibility, whilst the involuntary functions of nutrition, secretion, &c., are going on increased, diminished, or unaltered, according to circumstances. The end which Nature has in view in assigning this condition to the human body, is to restore to it that strength and vigour which it has parted with during the waking hours. The precise amount of sleep which each person requires is difficult to be ascertained. Some need more than others, either from age, constitution, or other circumstances; as a general rule, however, eight hours is deemed to be an interval sufficiently long to restore the animal economy, and sleep indulged in beyond that period is apt to be injurious rather than beneficial. The time of retiring to rest has a great deal to do with the refreshing powers of sleep. The best time is between ten and eleven o'clock, the common axiom being that two hours sleep before midnight is worth four hours after it. Sleep should be rarely indulged in during the day, except on extraordinary occasions of fatigue, weariness, &c. The custom of sleeping after a heavy meal is especially injurious, not only in its immediate consequences, but as calculated to produce apoplexy, paralysis, and other serious disorders. In order to ensure comfortable sleep, it is necessary that sufficient exercise be taken in the day; that the food, particularly in the evening, be moderate in quantity and easily digested; the bed-chamber freely ventilated; the bed-clothes moderately light, and the mind free from much disturbance. The use of the flesh-brush on going to bed, and keeping the body cool and the feet warm, are grand means of promoting sleep.

SLUGS, TO DESTROY.—Take a quantity of cabbage-leaves, and either put them into a warm oven, or heat them before the fire till they get quite soft; then rub them with unsalted butter, or any kind of fresh dripping, and lay them in places infested with slugs. In a few hours the leaves will be found covered with snails and slugs, which may then, of course, be destroyed in any way the gardener may think fit.

SMALL POX.—This, the most serious of all the eruptive diseases, though having many symptoms in common with other affections of this inflammatory class, has some peculiar to itself, and which, carefully observed, will always accurately define the disease, and point out small-pox from every other analogous affection. These distinctive features are the greater heat of the skin, the nausea and sickness that from the first attend it, and the fact that the rash appears on the fourth day of the illness, and not on the third, as in other eruptive diseases. Small-pox usually commences with shivering, pains in the back and head, heat, thirst, nausea, often sick-

ness, a general feeling of languor and debility, quick full pulse, great heat and dryness of the skin, and a white furred tongue. This state continues with the usual febrile symptoms and nightly exacerbations till the fourth day, when a fine papillary rash, like grains of millet seed, breaks out in the face, neck, arms, and breast; in a few hours more extending over the rest of the body. On the fifth day the rash has become more distinct, each papille has become larger and filled with a transparent fluid, changing its form into that of a vesicle, which as the disease advances enlarges with a flat head and depressed centre, the fluid passing from a transparent lymph into a yellowish matter. While this change is taking place, the extremities and the head swell, the head and face often becoming immensely distended, closing the eyes, and giving to the countenance a deformed and unnatural appearance. About the eighth day the maturation of the pustules is completed, and from thence to the eleventh day the decension of the eruption takes place, the pustules burst, the matter is effused, scabs are formed, and the dead cuticle begins, from the twelfth day, to peel off or disquamate, leaving pits in the skin, the consequence of the suppuration having destroyed the fatty matter beneath the cuticle. As the different stages of the disease are advancing, corresponding changes are taking place in the constitution of the patient; the heat and thirst increase, the pain, restlessness, and anxiety are augmented; the inflammatory and febrile actions keep advancing, rendering the slightest noise intolerable, and causing delirium and a chain of the most dangerous symptoms. **Treatment.**—The inflammatory nature of small-pox renders what is called the antiphlogistic mode of treatment, in all its details, a duty of imperative importance. For this purpose, the room in which the patient is placed should during the disease be kept dark and cool, and at least once a day thoroughly ventilated by means of a fire in the grate, for a short time night and morning, but especially at the latter period. The room also should be frequently purified by sprinkling the floor with chloride of lime, or by the burning of vinegar on a heated shovel. As the stomach is the first organ sensibly affected, and continues more or less disturbed during the whole disease, the treatment should begin by giving the patient an emetic, composed, if an adult, of twenty grains of ipecacuanha and one grain of tartar emetic; and as soon as that operation has ceased, the following powders and saline purgatives are to be employed, giving the mixture every two, and the powders every four hours.

Take of

Epsom salts	1 ounce.
Mint water	8 ounces.
Antimonial wine	3 drachms.
Spirits of nitre	2 drachms.
Syrup of saffron	2 drachms.

Mix, and give to an adult two tablespoonfuls for a dose, and to children, according to their age, from a dessertspoonful upwards.

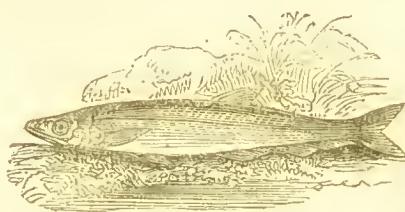
Take of

Calomel	3 grains.
Powdered antimony . . .	2 grains.
Rhubarb	3 grains.
Jalap	10 grains.

Mix, and make a powder. Give one of such a strength, every four hours to an adult till the bowels are well acted on, when they are to be discontinued; but the mixture is to be persisted in, though less frequently, or in half the dose. For a child from nine to twelve years of age, half of one of the above powders is to be given every four hours, till the same result is effected; and for younger children, each powder of the above strength is to be divided into three parts, and administered as the others. For an ordinary druk, in which the patient should ou no account be stinted, lemonade, thin gruel, or cold tea is to be used; all solid food or nutritious aliment must be withheld, the patient kept low, his head cool, and the feet hot. When the fever runs high, and the head symptoms are severe, it may be necessary to bleed, but if not, a blister is to be laid on the nape of the neck, and perhaps two small ones behind the ears, to relieve the tumefaction of the eyes, and where the want of sleep demands it, a draught at bed-time, composed of fifteen grains of nitre dissolved in two ounces of water, with twenty-five drops of laudanum, or to children from three to ten drops in a little gruel according to their ages. Such, in mild or distinct small-pox, is generally all the treatment needed; and even in the aggravated confluent, till the time of disquamation, often no other means are necessary. In cases, however, where the rash, after showing favourably, suddenly recedes from the skin, or only partly comes out, the patient must be put into a warm, or rather hot bath for three or four minutes; and when the pulse falls, and becomes small and feeble, as it becomes absolutely necessary to bring back the rash to the skin, hot wine and water must be given, together with soups, tonics, and stimulants, till the invigorated constitution has power to re-act. Should this not have been called for, a system of careful feeding, aided with wine and bark, must be commenced at the period when nature begins to throw off the dead eruption. The great object to be observed in the treatment of small-pox, is to keep the patient cool, and on the lowest regimen, till the disquamation begins to act freely on the bowels, and allay fever by cooling drinks. As soon as the patient is convalescent, the diet should be light, and composed chiefly of farinaceous foods, puddings, custards, &c. The body should be bathed once a week, and the cuticle excited by dry rubbing with a towel, and especial care taken for some weeks to keep children from the contact of the patient, who should for that time take an aperient every three days. To prevent the face and neck from being pitted, each pock in that neighbourhood should be lightly wetted with a weak solution of lunar caustic, at the period when the pustules are filled with a transparent fluid, while they are yet round,

and before suppuration has set in or the tops of the vesicles grown flat—or in other words, at the end of the second stage.

SMELT.—Of this fish there are two varieties, one not exceeding the length of three or four inches, the other arriving at the general length of six, eight, or nine inches, and sometimes even attaining twelve or thirteen. They are met with throughout the year in the seas that wash our coasts, and seldom go far from shore, except when they ascend the rivers, which they do with the tide; and in certain rivers it is remarked that they appear a long time before they spawn, being taken in abundance in the Thames and Dee in November



and the two succeeding months, in other rivers not until February. In March and April they spawn, and are very prolific; after which they all return to the salt water, and are not seen again in the rivers until next season. Smelts are to be met with in considerable numbers in the mouths of many of our rivers, estuaries, and harbours; and are usually fished for with a paternoster line, which should be fitted up with bristle. They vary in their depth of swimming, but in general lie about seven or eight feet from the surface, and still lower in very deep water. The baits for smelts are various; the best appears to be a small shrimp or part of a large one; small pieces of eel will also lure them. Gentles likewise prove an efficient bait; and when other baits fail, small portions of their own species will answer the purpose.

SMELTS BROILED.—When the smelts are well cleaned, slit them down the sides, and lay them in oil with salt and pepper for a little while; then put them on a gridiron over a clear fire, and broil them; when done, serve either with caper or tomato sauce.

SMELTS FRIED.—Scrape the fish clean, cut off the tails and fins, clean and wash them, then replace the livers; slit them down the sides, flour and fry them of a pale brown colour. Drain them and sprinkle salt over them. Serve them on a napkin.

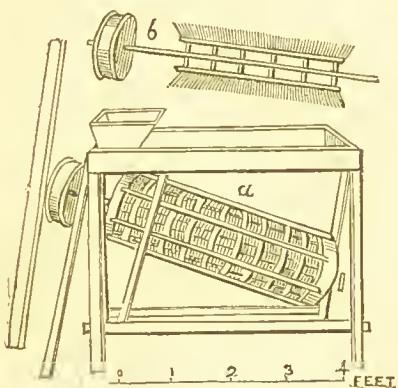
SMELTS PICKLED.—Wash, clean, and gut two dozen smelts, take half an ounce of nutmeg, a quarter of an ounce of mace, half an ounce of saltpetre, half an ounce of pepper, a quarter of a pound of common salt, all beaten very fine; lay the smelts in rows in a jar; between every layer of smelts, strew the seasoning with some bay-leaves; boil a sufficient quantity of red

wine to cover them; pour it boiling hot over them; cover the jar with a plate, when cold tie it down very close, and set it by in a cool dry place.

SMELETS Smelts, 24; nutmeg, $\frac{1}{2}$ oz.; mace, $\frac{1}{2}$ oz.; saltpetre, $\frac{1}{2}$ oz.; pepper, $\frac{1}{2}$ oz.; salt, $\frac{1}{2}$ lb.; bay-leaves, to flavour; red wine, sufficient.

SMELETS POTTED. — Draw out the insides of the fish, season with salt and pounded mace and pepper, lay them in a pan with butter on the top, bake them; when nearly cold, take them out, lay them upon a cloth; put them into pots, clear off the butter from the gravy, clarify, and pour it over them.

SMUT. — A disease affecting almost every species of corn, the grains of which become filled with a fetid black powder, instead of containing farinaceous matter. Wet seasons, animalcula, organic weakness, and other circumstances have been assigned as the primary causes of this disease. It has been ascertained from experiment that washing the seed is effective in preventing the communication of the disease to the crop to which it gives birth. A solution of lime-water is the best for this purpose; and it may be prepared by mixing a pound of fresh lime with three gallons of boiling water; the liquor then to be poured off and immediately used. In this liquor the wheat should be soaked for twelve hours, stirred twice or thrice during the time, and then mixed upon a floor with a powder made by pouring three gallons of boiling water upon five pounds of lime. A machine for cleaning infected grain from smut has been invented, which



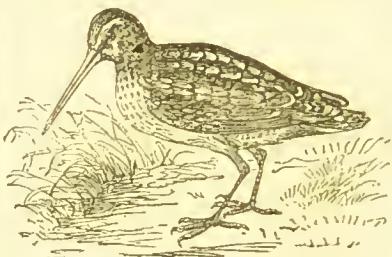
consists of a cylinder perforated with small holes, in the inside of which are a number of brushes, which are driven round with great rapidity. The corn infected with the smut is put into the cylinder by a hopper *a*, and the constant friction caused by the rapid motion of the brushes *b*, effectually separates the smutty grain, which is driven through the holes of the cylinder.

SNAILS, TO DESTROY. — Snails are particularly fond of bran; if a little is spread on the ground, and covered with a few cabbage-leaves or tiles, they will con-

gregate under them in great numbers; and by examining them every morning, and destroying them, their numbers will be materially decreased.

SNEEZING. — A convulsive or spasmodic effort, the result of reflex action, originating in irritation of the lining membrane of the nostril, by which air is forcibly sent through the passage so as to expel any cause of irritation. Sneezing is one of the first symptoms of cold, of influenza, of measles, and of diseases which involve the air-passages. Continual sneezing is a spasmodic affection, and may be relieved by emetics.

SNIPE. — A bird found in all parts of the globe. In winter they are universally spread over Great Britain, and are more particularly



to be met with in low marshy grounds. In spring they disperse themselves to higher and more airy situations, and then inhabit our mountains and moors. Snipe-shooting affords excellent diversion; but those who attempt it should be possessed of a strong constitution, and considerable fortitude and energy; wet and dirt must not be cared for, nor must the coldness and severity of the weather be heeded. Snipes are difficult to hit when on the wing, owing to the irregular twistings of their flight: but this difficulty is soon surmounted if the birds are allowed to reach to a certain distance, when their flight becomes steady and easy to traverse with the gun; there is no reason to be apprehensive of their getting out of the range of the shot, as they will fall to the ground if struck but slightly with the smallest grain. Snipes like many other birds always fly against the wind: therefore, the sportsman by keeping the wind at his back, has this advantage of the bird when it rises, that it presents a fairer mark. These birds are scarcely good until November, when they get very fat. In severe weather, suipes resort in numbers to warm springs, where the rills continue open and run with a gentle stream; these, on account of their long bills, are then the only places where they can hunt for food. Snipes lie better in windy weather than in any other, and as they then usually make a momentary halt or hanging on, that is the time to fire. When they cross, also, by firing well forward, they seldom escape. Snipes are among the most inconstant of birds: a frosty night will send away the whole of a flight that had been there the day before; and again in two days' time they may return, if open weather

and a dry wind succeed. A regular snipe locality should be tried not only every day, but twice a day, so uncertain are snipes in fixing themselves even for a day. The localities for snipe-shooting are the Essex Marshes, Cambridgeshire, Lincolnshire, and Northamptonshire. Scotland also presents them in plenty on its moors and around its lochs; both North and South Wales also furnish good sport; while in all parts of Ireland, these birds plentifully abound.

SNIPE PIE.—Take three snipes, bone them, and fill them with light forcemeat, adding the tralls and truffles pounded to it; place the birds in a deep dish, with a little forcemeat all round; cover with puff paste; egg and ornament it, then place it in an oven. When three parts baked, remove the crust, and pour in some rich gravy, wine-glassful of madeira, and season with cayenne and lemon-juice, according to taste; then put on the crust, and finish baking.

SNIPE, TO CARVE.—The carving of snipe consists simply of cutting the bird in two, lengthways.

SNIPES, TO DRESS.—They should be tied on a small bird spit, and put to roast at a clear fire; a slice of bread is put under each bird to catch the trail, that is the excrements of the intestines; they are considered delightful eating; baste with butter, and froth with flour; lay the toast on a hot dish, and the birds on the toast; pour some good gravy into the dish, and send some up in a boat. They are generally roasted from twenty to thirty minutes.

SNOW POSSET.—Boil a stick of cinnamon and a quarter of a nutmeg, with a quart of new milk, and when it boils, remove the spice. Beat the yolks of ten eggs well, and mix gradually with the milk until thick; then beat the whites of the eggs with sugar and canary wine into a snow. Put a pint of canary wine into a saucepan, sweeten to taste, set over a slow fire, and pour the milk and snow into the saucepan, stirring the whole of the time it is over the fire; when warm, remove from the fire, cover close, and set aside a short time before partaking of it.

Cinnamon, 1 stick; nutmeg, $\frac{1}{4}$ of 1; milk, 1 quart; eggs, 10; sugar, to sweeten; canary wine, 1 pint.

SNUFF TAKING, INJURIOUS EFFECTS OF.—This habit is extremely injurious, and a common cause of dyspepsia. It is a pretty well ascertained fact, that where snuff is taken in large quantities, a great portion enters the stomach, and as a matter of course seriously impedes the functions of that organ. Some snuffs produce more injurious effects than others, and this is the case with the highly perfumed, and damp heavy kinds. The least injurious kind is probably what is called the high-dried Irish or the Welsh snuff, for in the roasting of these, some of the narcotic principle is destroyed; therefore, a few pinches occasionally will not do much harm. But, however desirable it may be for a person to wean himself from this habit, still the confirmed snuff-taker should be cautious not to abandon

the indulgence all at once, but to lessen the quantity gradually until it is finally abandoned. The reason for this is, that the system, after being so long accustomed to its stimulant, might flag under the withdrawal of it, and occasion serious illness. There are other reasons why snuff-taking should not be indulged in; it is an offence against cleanliness; it is disagreeable to other persons with whom the snuff-taker may be brought in contact; and it occasions a great waste of time.

SNUFFERS.—A kind of scissors constructed to cut off the superfluous wick of the candle during combustion. Snuffers are very frequently defective, either working so stiffly as to prevent their proper application, or opening and closing so loosely that no hold can be retained on the wick. To obviate these defects, a patent snuffer has been designed, which, by the rising and falling of a steel slide or cutter, hides and retains the snuff in the box. Snuffers will sometimes not act, owing to their becoming clogged with snuff; they should therefore be cleaned out every day, to secure their efficiency.

SOAP.—A substance used for cleansing purposes, and made in a variety of forms. Yellow soap is the best for ordinary domestic purposes, mottled soap for the scrubbing of very dirty and greasy boards, soft soap for cleaning paint; and curd soap for washing the skin with. Scented and fancy soaps are generally speaking deleterious in their effects upon the skin, and should be avoided. These soaps are for the most part, made from the refuse left in the manufacturing of ordinary qualities, and are thus sophisticated to disguise their grossness.

SOAP LINIMENT.—This is sold ready prepared by the chemists; it is used in chronic rheumatism, neuralgia, &c., and as a vehicle for other more active rubifacients.

SODA, USES AND PROPERTIES OF.—This well-known and extensively-used alkali is now manufactured from common salt, which is a muriate of soda. Soda is best known in the form of its carbonate or sub-carbonate, and bi-carbonate; the former being largely used domestically, the latter medicinally, and for some domestic purposes. The sub-carbonate of soda, being more irritant and not so pleasant as the carbonate, the latter is generally employed in medicine, and is usually sold in the form of white powder. Bi-carbonate of soda is largely used for making the effervescent soda powders. Many dyspeptic persons take it habitually as an antacid. The habitual use of soda internally, even in comparatively small quantities, is highly pernicious; it exerts a most debilitating effect upon the stomach, and also upon the system at large. The usual dose as an antacid, is from ten to twenty grains in solution.

SODA CAKE.—Take one pound of flour, half a pound of moist sugar, and rub in half a pound of butter, lard, or dripping. Then take four eggs well beaten, a teacupful of milk a little warm, and half a teaspoonful of soda dissolved in the milk. Mix all together, and put it into the oven

immediately; two hours will bake it in a quick oven.

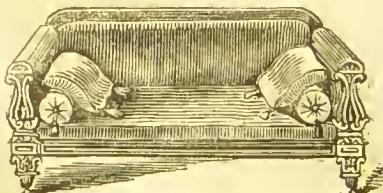
Flour, 1lb.; sugar, $\frac{1}{2}$ lb.; butter, lard, or dripping, $\frac{1}{2}$ lb.; eggs, 4; milk, 1 teacupful; soda, $\frac{1}{2}$ teaspoonful.

SODA WATER, PROPERTIES OF.—The water properly so called, contains about twenty grains of hi-carbonate of soda to the half-pint, and strongly impregnated with carbonic acid gas, but good deal is made without the addition of soda at all. When used simply as a drink, this omission is unimportant, but not so when it is required as an antacid. As a drink in febrile disorders, soda-water is often beneficial and very grateful, but should not be given in too great quantities at once, otherwise the gas may produce unpleasant sensations. In such cases a small portion may be poured out, and the bottle after being opened, should be re-corked as speedily as possible; the cork should be secured by tying, and the bottle inverted in a jug of cold water; in this way the gas is preserved. Soda-water is an excellent vehicle for conveying milk to the stomach charged with acid, and consequently liable to feel oppressed by milk alone. The mode of application is, to heat nearly to boiling, a teacupful of milk, dissolve it in a teaspoonful of refined sugar, then put it into a large tumbler, and pour over it two-thirds of a bottle of soda-water.

SODA WATER POWDERS.—A pleasant, cooling summer drink. The blue paper contains eararbonate of soda, thirty grains; the white paper, tartaric acid, twenty grains. Dissolve the contents of the blue paper in half a tumhler of water, stir in the other powder, and drink during effervescence. Soda powders furnish a saline beverage, which is very slightly laxative, and well calculated to allay the thirst in hot weather.

SODA WATER, TO MAKE.—Dissolve six drachms of dried carbonate of soda in a quart bottle of water, and four drachms and a half of tartaric acid in another bottle of the same size; pour out a wineglassful from each bottle, and throw them at the same time into a tumhler, when it will immediately effervesce. It should be drunk in this state. This is a good soda-water, and a dozen glasses thus prepared will not cost more than one shilling and threepence or one and sixpence. If ten drops of the muriated tincture of iron be put into the tumhler, a most excellent and agreeable tonic mineral water is produced, which strengthens the tone of the digestive organs in a very remarkable degree.—See GAZOGENE.

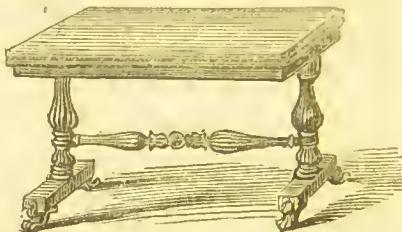
SOFA.—An article of furniture not to



be regarded as a luxury only, but as an

essential comfort. In cases of partial illness, when a person is not bad enough to keep his bed, nor yet well enough to sit, a sofa affords great relief. A sofa is a more convenient article than a couch where the choice is confined to one of them, because it admits of a person lying at either end. In purchasing sofas, low-priced ones should be avoided, and this caution is all the more necessary, as the sofa appears to be a favourite article upon which dealers in worthless furniture practice their nefarious art.

SOFA TABLE.—An article of furniture designed for use by the side of the sofa, and of especial service to invalids, elderly persons, and fatigued students. The table seen in



the engraving is well adapted for the purpose indicated.

SOLDERING.—Cut out a piece of tin-foil the size of the surfaces to be soldered. Then dip a feather in a solution of sal-ammoniac, and wet over the surfaces of the metal, then place them in their proper position, with the tin-foil between. Put it so arranged on a piece of iron, hot enough to melt the foil. When cold they will be found firmly soldered together.

SOLES BAKED.—Prepare the soles as if for frying; mix a piece of butter with some flour, fine herbs, shallots, and mushrooms chopped fine, salt and pepper on a silver dish, place the soles on it, and cover them with the remains of the seasoning; moisten them with some melted butter and a little white wine, and let them stew slowly in an oven. If you have not an oven, you can dress them between two plates.

SOLES BOILED.—The largest soles are usually chosen for boiling. After they have been well cleaned, rub them over with lemon-juice, and set them in cold salt and water on the fire. When they begin to boil, skim the water, and then simmer them only, from ten to fifteen minutes, according to their size. Serve with anchovy sauce, and garnish with parsley.

SOLES, COLLOPS OF.—Choose some small soles, and marinade them in the juice of two lemons, with salt, pepper, and sweet herbs shred; when they have remained sufficiently long in the above, drain them: then stuff the fish with some crumb of bread boiled in milk, and heat up with the yolks of two eggs; sprinkle them with flour, and fry them of a clear gold colour. Serve them on fried parsley.

SOLES, FILLETS OF.—Have a flat silver dish or tin baking-pau, and spread a piece of fresh butter over it. Mince very finely, parsley, shallots, and mushrooms; season with pepper and salt, fry the herbs, and lay them on the buttered dish. Place the fish neatly cut and trimmed over this, and cover with fine bread crumbs. On the top of this put a few pieces of butter; moisten with a little white wine; cook under a furnace with a few embers, that the fry may get crisp. Squeeze lemon over it, and serve very hot.

SOLES FRICASSEED.—Fry them a nice brown, drain them, and make a few balls with a small sole boned and chopped, a little grated bread and lemon-peel, parsley chopped, pepper, salt, nutmeg, yolks of egg, a piece of butter; fry these; thicken some good gravy (and some port wine, not too much) with a little flour, boil it up; add ketchup, and lemon-juice; lay in the fish and balls, simmer them a few minutes, garnish with lemon.

SOLES FRIED.—Skin them and cut off the fins, roll them in a cloth, dredge them with flour, rub them over with the yolk of an egg, shake bread crumbs over them, and fry them in boiling fat.

SOLES STEWED.—Cut the soles into fillets, and let them steep in marinade for two hours in vinegar and water; then take them out, and dry them with a cloth; put them into a stewpan with half a pint of white wine, a quarter of a pint of coulis, some sweet herbs, a clove of garlic, and a shallot; stew the soles in this till done enough; keep them hot. When you strain the gravy, thicken it with a little potatoe flour; boil it up, and serve over the fillets. A few oysters and a truffle may be added.

SOLES STUFFED.—Make a force with whiting or perch, minced very small, and mixed with butter and sweet herbs, kneaded together by yolks of eggs, and seasoned with pepper, salt, and nutmeg. Having skinned and cleaned the soles, stuff them with this mixture, rub them with butter; strew them with bread crumbs and bake them.

SOLES, TO CARVE.—When large, soles may be served as turbot; but when small, they should be sliced across.

SOLES, TO CHOOSE.—To be good, soles should be thick and firm, the belly of a fine cream colour; if they incline to a blue white and the body flabby, they are not good. Soles should be boiled in salt and water. Serve with anchovy sauce.

SOLES, WITH MUSHROOMS.—Put a quart of milk into a stewpan or fish-kettle, with the same quantity of water, a piece of butter, a sprinkling of salt, and a little lemon-juice; then put in the soles, and set the stewpan over a moderate fire, letting them simmer very gently, till done; then take them up, place them on a cloth or napkin, to imbibe all the liquor from them; lay them on a dish, and pour over them a good mushroom sauce.

SORREL A LA BOURGEOISE.—Pick and wash as much sorrel as may be required, drain and squeeze all the water

from it, put it into a saucepan, and set it over the fire; when the sorrel is dissolved, if there be too much water, pour it into a cullender; then fry it lightly in a little butter. Put two spoonfuls of flour into a basin, beat up an egg with it, then add another egg; and when that is well beaten with the flour, pour in a glass of milk, and then mix it with the sorrel, set it over the fire, and stir it, until it has boiled for a quarter of an hour; dish it, and serve with either poached or hard eggs.

SORREL, CULTURE OF.—This plant is a very useful kind of spinach plant, as it may be gathered the whole year round. It is readily increased by division of the roots, and should be planted in rows at least two feet apart, on strong loamy soil, where it may always have abundant moisture. It requires no further attention, a moderate number of plants affording sufficient leaves for a gathering at almost all times, and continuing good for many years.

SORREL OMELET.—Pick, wash, and blanch some sorrel, cut it in pieces, and fry it lightly in a little butter, with shred parsley; then put the sorrel into a saucepan, with a little cream; season, and let it boil slowly; in the mean time make an omelet in the usual way, lay it on a dish, thicken the sorrel with the yolks of two eggs; pour on it the omelet, and serve it very hot.

SORREL PURÉE.—Pick and wash the quantity of sorrel required in several waters; then add to it a handful of chervil and some white beet; squeeze the water out and scald for a minute in boiling water; then put it into cold water, to keep it green; again squeeze out all the water, and chop it fine; put it in a saucepan with a piece of butter, some salt and pepper, with the yolks of three eggs, which must be added by degrees; then arrange it on a dish, and serve it round meat, or with hard-boiled eggs on it, according to taste. To vary the flavour, stock may be sometimes added instead of the eggs.

SORREL SAUCE.—Wash and clean a large handful of sorrel, put it into a stewpan that will just hold it, with a bit of butter the size of an egg. Cover it close, set it over a slow fire for a quarter of an hour; press the sorrel with the back of a wooden spoon through a hair sieve. Season with pepper, salt, and a small pinch of powdered sugar; make it hot, and serve up under lamb, veal, or sweetbread. Cayenne, nutmeg, and lemon-juice are sometimes added.

SORREL SOUP.—Take two handfuls of sorrel, some sweet herbs, a large carrot, and one onion, and stew them in stock, or water, if for maigre-day; when quite tender, rub through a tamis, and add the yolks of three eggs.

SOUFFLÉ.—The lightness and delicacy of a well-made soufflé render it generally a very favourite dish. It may be greatly varied in its composition, but in all cases must be served the very instant it is taken from the oven. A common soufflé pan may be purchased for a few shillings, but those

of silver or plated metal, such as seen in the engraving, are, of course, more expensive.



A plain, round, cake-mould, with a strip of writing-paper six inches high, placed inside the rim, will answer on an emergency to bake a soufflé in. The following receipt will serve as a guide for the proper mode of making it; the process is always the same whatever the ingredients may be. Take from a pint and a half of new milk or of cream sufficient to mix four ounces of flour of rice to a perfectly smooth batter; put the remainder into a very clean, well-tinned saucepan or stewpan, and when it boils, stir the rice briskly to it; let it simmer, keeping it standing all the time, for ten minutes, or more, should it not be very thick; then mix well with it two ounces of fresh butter, one ounce and a half of pounded sugar, and the grated rind of a lemon (or let the sugar which is used for it be well rubbed on the lemon before it is crushed to powder); in two or three minutes take it from the fire, and beat quickly and carefully to it by degrees the yolks of six eggs; whisk the whites to a very firm solid froth, and when the pan is buttered, and all else quite ready for the oven, stir them gently to the other ingredients; pour the soufflé immediately into the pan, and place it in a moderate oven for a quarter of an hour. When the soufflé has risen very high, is of a fine colour and quite done in the centre, which it will be in from half to three-quarters of an hour, send it instantly to table.

New milk, or cream, 1½ pint; flour of rice, 4 ozs.; butter, 2 ozs.; sugar, 1½ oz.; eggs, 6; salt, a few grains; lemon rind, 1.

SOUFFLÉ PUDDING.—Take a pint of new milk, put half into the stewpan, and mix the other half with five spoonfuls of fine flour. Let the milk be scalding hot; then stir in the other milk and flour. Let it all scald five minutes, stirring it all the time. Then take five eggs, stir in the yolk. Beat the whites to a froth, and when cold mix them altogether. Sweeten to taste, flavour with anything you like; strain it; stick the mould with any dried fruit. Put a buttered paper under the cloth. Boil it an hour and a half, and take it off five minutes before it is wanted.

SOUP MAIGRE.—Melt half a pound of butter in a stewpan, shake it round, and throw in half a dozen sliced onions. Shake the pan well for two or three minutes, then put in five heads of celery, two handfuls of spinach, two cabbages cut small, and some parsley. Shake the pan well for ten minutes, put in two quarts of water, some crusts of bread, a teaspoonful of pepper, and three or four blades of mace; a handful

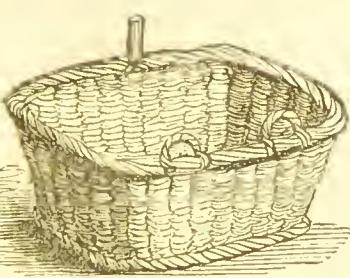
of white beet-leaves, cut small, may be added. Boil it gently for an hour. Just before serving beat in the yolks of two eggs, and a tablespoonful of vinegar.

SOUPS.—See ASPARAGUS, BEEF, CABBAGE, CALF'S HEAD, CARROT, EEL, GIBLET, HARE, JULLIENNE, MACARONI, MOCK TURTLE, OX TAIL, PEA, RICE, SAGO, SORREL, SPINACH, SPRING, TURTLE, VERMICELLI.

SOWING.—In considering this process, a few practical instructions will in the first instance be given respecting sowing as applied to the garden. Let all sowing be done in drills. For small seeds such as lettuce, cabbage, &c., the drills may be sunk by pressing the handle of the hoe into freshly dug soil; but for larger seeds, as parsnips, beet, and onions, the drills must be struck with the hoe. Almost all sowing should be performed in dry weather, more particularly all early sowing in winter and spring; but in hot weather, in summer and autumn, it may often be eligible to take advantage of sowing immediately after a shower or moderate rain. The drills being at equal distances from one another, not only admit the sun, air, and rain more effectually to the plants, and give them a greater scope than such as are sown broadcast, but admit more readily the hoe between the drills to cut down weeds and loosen the soil. The general method of forming drills for the reception of seeds, is with a common drawing hoe, sometimes with a large hoe, and sometimes with a middling or small hoe, according to the size of the drill required, and the size and nature of the seeds; drawing the drill sometimes with the corner of the hoe, especially for larger seeds, and sometimes with the edge of the hoe flatwise or horizontally; large seeds, such as peas, kidney beans, many of the nut kinds, and other large seeds both of trees, shrubs, and herbaceous plants, require a deep angular drill, drawn with the corner of the hoe, turning the face or edge close to the line, and drawing the drill along with an angular bottom evenly the depth required, the earth remaining close along the side of the drill, ready for turning in again over the seeds; but when flat or shallow drills are required for smaller seeds it may, in many cases, be more eligible to draw the drill with the hoe flatwise, holding the edge in a horizontal position. In bedding the sowing, the ground is first dug and formed in four or five feet beds, with alleys a spade in width or more between bed and bed, and the earth being drawn off the top of the bed with a rake or spade, half an inch or an inch deep into the alleys, the seed is then sown all over the surface of the bed, which being done, the earth in the alleys is immediately drawn or cast over the bed, again covering the seeds the same depth, and the surface is finally raked smooth. The method of bedding in sowing by sifting is sometimes practised for very small or light seeds of a more delicate nature, which require a very light covering of earth when sown. In order to bury them as shallow as possible, cover them by sifting fine earth over them out of a wire sieve. *In sowing*

large pieces of ground, the sower is habited in a peculiar manner—he puts on a sowing sheet. The most convenient form of one is that of the semi-spheroid, made of linen sheeting, having an opening large enough along one side of the mouth to allow the head and right arm of a man to pass through, and the portion passed under, rests upon his left shoulder. On distending its mouth with both hands, and on receiving the seed into it, the superfluous portion of the sheet is wound tightly over the left arm, and fastened under it into the left hand; by which it is firmly held, while the load of seed is thus securely supported by that part of the sheet which passes over the left shoulder across the back, and under the right arm. The right arm which throws the seed, finds easy access to the corn from the open side of the mouth of the sheet, between the left hand and the breast of the sower. A square sheet knotted together in three of its corners, and put on in a similar manner, is sometimes used as a sowing sheet; but one formed and sewed of the proper shape, and kept for the purpose, is a much more convenient article. Linen sheeting makes an excellent material for a sowing sheet, and, when washed at the end of the season, will last many years. The difficult point is to make the sowing sheet fit the sower on the top of the left shoulder, where the greater part of the weight of the seed rests; and in attempting this, the principal thing to be considered is to make the strap, which goes over the shoulder, broad enough, and take the slope off the top of the shoulder from the neck downwards. The gatherings of the cloth on each side of the shoulder-top should be as neatly executed as in a shirt, and a couple of tapes should be drawn through a short hem, to be tied tight in front of the sheet across the breast. A basket of wicker-work such as

one hand only, but some sowers throw the seed with both hands, and then the instrument must be made to suit the practice. Such a one is a basket, or box made of thin deal, the nearest side carved to suit the front of the body. It is suspended by girths fastened to loops on the side next the sower, and passed round the back of the neck. A strap and buckle fastens it round the body, and the further side is suspended by straps slanting to the shoulders of the sower, and fastened to the strap buckled round behind his body. A more simple form of sowing seat for both hands is a linen semi-spheroidal bag, attached to a hoop of wood or of iron-rod, formed to fit the body, buckled round it, and suspended in front in the manner just described. Both hands are then at liberty to cast the seed. In sowing with one hand, the sower walks on the third and fourth furrow-slices from the open furrow, which he keeps on his right hand. Taking as much seed as he can grasp in his right hand, he stretches his arm out and a little back, with the clenched fingers pointing forward, and the left foot making an advance of a moderate step. When the arm has attained its most backward position, the seed is begun to be cast with a quick and forcible motion of the hand forward. At the first instant of the forward motion, the forefinger and thumb are slightly relaxed, by which some of the seeds drop upon the furrow brows, viz., the open furrow; and while still further relaxing the fingers gradually, the back of the hand is so also turned upwards, until the arm becomes stretched before the sower, by which time the fingers are all thrown open, with the back of the spread hand uppermost. The motion of the arm being always in full swing, the grain, as it leaves the hand, and partaking of its momentum, receives such an impetus as to be projected forward in the form of a figure corresponding to the sweep made by the hand. The forward motion of the hand is accompanied by a corresponding forward advance of the right foot, which is planted on the ground the moment the hand casts forward the bulk of the seed. The seed ought to be cast equally over the ground. If the hand and feet do not move regularly, the ground will not be equally covered, but a strip left almost bare between the casts. The arm should always be well thrown back and stretched out. If the hand is opened too soon, too much of the seed falls upon the furrow-brow, and the crown will receive less than its proportion. If the hand is brought too high in front, the seed is apt to be acted upon by the wind, and tossed in a different direction from that intended. In casting high, the hand is elevated from the ordinary level of the elbow, whereas it should always sweep below that line. The hand should be kept low, the arm stretched out, and the seed made to fly off in a curve in front, by a sharp turn up of the back of the hand, and a free issuing of the fingers near the end of that action, the nearest parts of the seed fully within two paces of the sower. Seed, when so cast, will be little affected, even by a strong wind.



seen in the engraving, is also sometimes used for the sowing of seed. It is suspended by girths, fastened to the two loops shown on the rim of the basket, by passing the girth from the left-hand loop over the left shoulder, behind the back of the other loop, or from one loop to the other round the back of the neck; and the left holds the basket steady by the wooden stud on the other side of the rim. Both these utensils for sowing seed are intended for the use of

SOY.—A soy for fish, &c., resembling the Indian soy, may be made as follows:—Pound very small some walnuts when fit for pickling, in a marble mortar: squeeze them through a strainer; let the liquor stand to settle, and then pour off the clear. To every quart of liquor put a pound of anchovies, and two cloves of shallot. Boil it till the scum rises, and then clear it well. Add two ounces of Jamaican pepper, a quarter of an ounce of mace, and half-a-pint of vinegar. Boil it again until the anchovies are dissolved and the shallot tender, and let it stand till next day; then pour it off, and bottle it for use. Strain the sediment through a sieve, and put it by separately. When used for fish, put some of it to the usual mixture of anchovy and butter, or to plain butter.

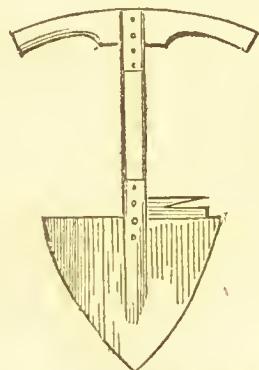
SPADE.—A well-known agricultural implement, of which there are several varieties, according to the use to which it is to be put. Spades are usually manufactured with a flat blade; but perforated blades are sometimes prized as cleaning or freeing themselves better from earth in adhesive soils; semi-cylindrical blades are also preferred as entering the soil more easily, because gradually, and in effect as if a flat spade, with a pointed or shield-like curved edge were used. Spades with curved edges or pointed blades, are easiest thrust into the earth in hard or stiff soils, and clean themselves better; but they are more apt to leave more untouched parts in the bottom of the trench than the common square-mouthed spade. They are the best kind for new ground work, but are not well adapted for culture. The under-foot spade, as seen in the engraving, should be made very

cordate or shield-form blade, joined to a handle by a bent iron shank. It is used for cutting turf from old sheep-pastures, with a view to its being employed either for turfing garden-grounds, or being thrown together in heaps, to rot into mould. It is also used in removing ant-hills and other inequalities in sheep-pastures, in parks, or rough lawns. A thin section often is first removed, then the protuberance beneath it is taken out, and the section is replaced, which having been cut thin, especially on the edges, readily resists; and the operation is finished by a gentle pressure by the foot, back of the spade, brake, or roller. Another implement of this nature is known as the Flemish spade. It has a long handle—in some cases six or eight feet; but no tread for the foot of the operator. The long handle forms a very powerful lever; when the soil is easily penetrated, it may be dug with



greater ease with this spade than with any of the forms in common use; and carts may be filled with earth, and earth thrown to a greater distance by this implement, for the same reason.

SPANIEL.—The varieties of the spaniel are numerous. The cocker spaniel, as seen in the engraving, is used for sporting,



strong, the shaft, or handle, square, with the angles rounded off, and strongly plated over where it is joined to the cup-angle at the top, and to the blade below. The blade is about fourteen inches across, and twelve inches deep; quite perpendicular, with sharp cutting edges, and a hilt or piece of iron riveted on for the feet. For the stubbing of hedges, taking the top sods off drains, and for various uses where strength is wanted, this spade will be found a most powerful instrument. The turf spade consists of a

especially woodcock shooting. His ears are usually long and well-feathered, as are also his legs and tail. His hair is remarkably waved and curly. When the spaniel is intended for sporting purposes he should be taken out very early to the field, as at four or five months old, when he ought to be allowed about and hunt every moving thing; and the signal for breaking should not be made until he has evinced a predilection in choosing the objects. As soon as he begins to hunt fowls in preference to other living objects, as rats, &c., immediately commence his training lessons, the first of which is, that now he is to chase at your command only, and that the animals he hunts should be such as you will habituate him to, and not those he might choose for himself. Having been thus thoroughly initiated in this subserviency to your sporting pursuits, he is next to be taught to fetch and carry;

and that, in doing this, he shall not tear or spoil his game, or whatever he may have in his mouth.

SPANISH CAKE.—Sift half a pound of flour into a broad pan, and sift a quarter of a pound separately into a deep plate, and set it aside. Put the milk into a dish. Cut up the butter, and set it on the stove, or near the fire, to warm; but do not let it get too hot. When the butter is very soft, stir it all through the milk, and set it away to cool. Beat the eggs very light, and mix the milk and butter with them all at once; then pour all into the pan of flour. Put in the spice and the rose-water; or, if you prefer it, eight drops of essence of lemon. Add the yeast, of which an increased quantity will be necessary, if it is not very strong and fresh. Stir the whole very hard. Add the sugar gradually. If the sugar is not stirred in slowly, a little at a time, the buns will be heavy. Then, by degrees, sprinkle in the remaining quarter of a pound of flour. Stir all well together; butter a pan, and put in the mixture. Cover it with a cloth, and set it near the fire to rise. It will, probably, not be light in less than five hours. When it is risen very high, and is covered with bubbles, bake it in a moderate oven about a quarter of an hour, or more, in proportion to its thickness. When it is quite cool, cut it in squares, and grate loaf sugar over them. This quantity will make twelve or fifteen buns.

SPANISH CREAM.—Boil, in half a pint of water, an ounce of isinglass till dissolved; strain and mix it with a quart of cream or good milk—if cream, not so much isinglass; stir it over the fire till it comes to a boil; when a little cooled, add gradually the beaten yolk of six eggs, and a glass of white wine. Pour it into a deep dish, sweetened with pounded loaf-sugar, stir it till cold, and then put it into a shape. Or, in lieu of the glass of wine, rub a lump of sugar upon the peel of a lemon to extract the flavour, and add it to the cream.

Cream or milk, 1 quart; water, $\frac{1}{2}$ pint; isinglass, 1 oz.; eggs, 6 yolks; white wine, 1 glass; sugar, to sweeten.

SPANISH FLUMMERY.—Scald a quart of cream with a little cinnamon or mace. Mix this gradually into half a pound of rice flour, and then stir it over a gentle fire till it acquires the thickness of jelly. Sweeten it to taste, and pour it into cups or shapes. Turn it out when cold, and serve it up. Cream, wine, or preserves, eat well with it; or it may be eaten alone, as preferred. Oatmeal may be used instead of rice.

SPANISH FRITTERS.—Cut the crumb of a French roll into square pieces, of the thickness of the finger; add nutmeg, sugar, pounded cinnamon, and an egg. When well soaked, fry the fritters of a delicate brown, and serve with butter, wine, and sweet sauce.

SPANISH PUFFS.—Put into a saucepan half a pint of water and a quarter of a pound of butter; stir it till it boils, and mix in four tablespoonfuls of flour; stir it well together, and add six yolks and four whites of eggs, two at a time; let it cool, and, with

a dessert-spoon, drop it into boiling clarified dripping or lard. To make giugcr puffs, a teaspoonful of pounded ginger may be added.

Water, $\frac{1}{2}$ pint; butter, $\frac{1}{4}$ lb.; flour, 4 tablespoonfuls; eggs, 6 yolks, 4 whites.

SPANISH SAUCE.—Dissolve a couple of ounces of good butter in a thick stewpan or saucepan; throw in from four to six slices of shallots, four ounces of the lean of an undressed ham, three ounces of carrot, cut in small dice, one bay leaf, two or three sprigs of parsley, and one or two of thyme; but these last must be small; three cloves, a blade of mace, and a dozen corns of pepper. Add part of a root of parsley, if it be at hand, and keep the whole stirred or shaken over a moderate fire for twenty minutes; then add, by degrees, one pint of very strong veal stock or gravy, and stew the whole gently from thirty to forty minutes; strain, and skim off the fat, and it will be ready to serve.

Butter, 2 ozs.; shallots, 4 to 6; lean of undressed ham, 4 ozs.; carrots, 3 ozs.; bay leaf, 1; little thyme and parsley, in sprigs; cloves, 3; mace, 1 blade; peppercorns, 12; little parsley-root; strong veal stock or gravy, 1 pint.

SPASM.—By this word is understood a violent and involuntary contraction of one or more muscles, generally attended with great pain. Spasm is a species of convulsion, or eclampsia, with this difference, that either of the above are attended with an alternate contraction and relaxation, with longer or shorter intervals, as exemplified by the opening and shutting of the hand; but a spasm is one rigid and continuous lock or retraction of the muscular fibres, as in cramp, which suffers no intermission till the cure is effected. When spasm occurs in the limbs or muscles, it is called cramp; which see. When it takes place in a vital organ, as in the heart or lungs, it is frequently the closing symptom of a long train of diseased action, in an impaired constitution, and often proves fatal before relief can be obtained, or danger is apprehended. When occurring in the stomach, the patient, if possible, should be placed in a hot bath, or failing this, heated bricks or bottles of boiling water applied to the feet, the stomach fomented with hot water, in which some mustard has been mixed, and the following draught given every ten minutes till the contraction is overcome:—

Brandy . . . 1 dessertspoonful.

Sal volatile . . 20 drops.

Laudanum . . 10 drops.

Camphor water. 3 dessertspoonfuls.

Ether . . . 15 drops.

Mix in a wineglass, and drink immediately.

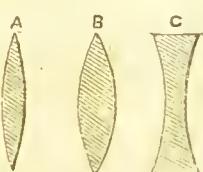
SPATULA.—A blunt flexible knife used by the apothecary, and in various medicinal



manipulations. It is usually made of iron, but bone substances are also used for substances that act chemically on iron. The

most convenient size of spatula for a domestic chest, is one with the blade about three and a half inches, and the handle three inches long.

SPECTACLES.—As age advances, every one experiences a difficulty in reading when the book or paper is held at the usual distance, and a similar imperfection of vision in discerning objects generally. In reading, especially, the evil increases until a distinct vision cannot be had but at a much greater distance, and at last this distance becomes so great, that the apparent size of the letters is too much diminished to discern them. This defect, the natural consequence of old age, is owing to the convexity of the eye having diminished; and it is to be remedied by using spectacles, the glasses of which are what is termed by opticians *double convex*, of which A and B in the annexed illustration are sections, showing that they are ground thicker at the middle than at the edges.



When defective vision is first experienced, glasses with a slight degree of convexity will do, as A, which opticians call the first sight; but as, after a few years, the eyes become still flatter, glasses more convex, as B, are necessary to enable a person to see to read distinctly at the usual distance; and on every increase of a few years, it will be required to have them more and more convex, or what is termed older sight. The more convex the glasses, the more they magnify, or the larger they make objects at the same distance appear. In general, when the eye is perfect, six or eight inches is the usual distance at which we hold small objects to view them, such as a book; but this distance is not exactly the same for all persons. To choose spectacles when the eyes are beginning to be defective through age, begin by trying glasses that magnify best, or what is called the youngest sight; if these enable a person to read at the usual distance, they are the kind to be employed; but if vision be still indistinct, try a higher magnifying power, and so on until the proper spectacles are found; but be careful not to use a higher magnifying power than is really necessary, otherwise the evil of age may be brought on prematurely. Many persons whose sight is defective, postpone the use of spectacles from too nice a regard to appearances; the folly of such a proceeding is obvious; but overtaking the vision, already weak, an injury is done to the eyes frequently beyond the reach of remedy, or the contrivances of art.

SPECULATION GAME.—A round game of cards at which several can play, using a complete pack of cards, bearing the same import as at whist, with fish or counters, on which such a value is fixed as the company may agree. The highest trump in each deal wins the pool; and whenever it happens that not one is dealt, then the company pool again, and the event is decided by the succeeding company. After determining

the deal, &c., the dealer pools six fish, and every other player four; then three cards are given to each, by one at a time, and another turned up for trump. The cards are not to be looked at except in this manner; the eldest hand shows the uppermost card which is a trump; the company may speculate on, or bid for it, the highest bidder buying and paying for it, provided the price offered be approved of by the seller. After this is settled, if the card does not prove a trump, then the next eldest is to show the uppermost card, and so on—the company speculating as they please, till all are discovered, when the possessor of the highest trump, whether by purchase or otherwise, gains the pool. To play at speculation well, a recoilition only is requisite of what superior cards of that particular suit have appeared in the preceding deals, and calculating the probability of the trump offered proving the highest in the deal then undetermined.

SPERMACETI OINTMENT.—Take a quarter of a pint of fine salad oil, a quarter of a pound of white wax, and half an ounce of spermaceti; melt these ingredients over a gentle fire, and continue stirring the ointment till it is cold.

SPICE, SPIRITS OF.—Take an ounce of black pepper, and an ounce of allspice, both fine and powdered, and a quarter of an ounce of grated nutmeg; infuse these ingredients in a pint of spirits of wine, then strain and bottle for use.

SPIDERS, TO DESTROY.—The species known as the red spider is very injurious and destructive to the different sorts of plants and fruit-trees, especially in forcing houses. It is found particularly so to those of the French bean, nelson, peach, vine, cherry, currant, and some other kinds. The generation and production of this insect are greatly favoured by the dry warm heat which is constantly kept up in the houses which contain these sorts of plants and trees, and there are many other circumstances which combine in bringing it forth. Constant daily watering or washing the trees, will have the power of starving these insects, but in doing this, care must always be taken that every part of the leaves are watered, otherwise the insects hide and save themselves in the dry part, and are preserved from the effects of the water. Throwing weak lime-water in a plentiful manner on the under side of the leaves, where the insects are mostly found, will soon destroy them. In the hot summer months, and when dry heat prevails, melon plants are very liable to be infected with the red spider, and the appearances of it may constantly be long noticed before the insects can be seen with the naked eye, by the leaves beginning to curl and crack in the middle parts. Whenever they are discovered to be in this condition, and there is fine warm sunny weather, the watering of them all over the leaves, both on the under and upper sides, is advised. The work should be performed about six o'clock in the morning, and the plants be shaded with mats about eight, shutting the sun shine with much power, shutting

the frames down closely until about eleven, and then admitting a small quantity of fresh air, letting the mats remain until about three in the afternoon, when they should be wholly taken away. The shade which is thus afforded by the mats prevents the leaves of plants from being scorched or otherwise injured by the action of the heat of the sun while they are in a wet cooled state. Where a southerly breeze prevails, watering them again about three in the afternoon is recommended, shutting them up close as before to keep the heat in, which causes a strong exhalation of the moisture, and is extremely destructive to the spiders. In all these waterings, the water is to be thrown as much and as finely on the under side of the leaves, where the insects mostly lodge; the vines or stems of the plants being gently turned to facilitate the operation. When these waterings are finished, the vines or stems of the plants are to be carefully laid down again in their former position. And if the day be sunny, the mats may remain as already directed, until the leaves of the plants become perfectly dry, on being admitted according to the heat that may be present at the time. It is further advised as a precautionary measure, that previously to the frames and lights which are to contain plants of this sort being employed, they should be well washed both inside and out, first with clean water, and then with a mixture of soapsuds and chamber lye; a brush or woollen rag being made use of in the operation; as by this method the eggs of the spiders that may have been deposited on them in the preceding season, may be cleared away and destroyed. These washings should never be performed in cold frosty seasons; and the soft or rain water should always be made use of.

SPINACH A LA FRANCAISE.—After picking, boiling, straining, and pressing, put the spinach into a pan of fresh water, and when it is cold make it into balls, and squeeze them in your hands until all the water is expelled; chop fine on a board with a wooden spade; then melt an ounce of butter in a stewpan, put the spinach into it, mix well for ten minutes, lightly dredge with a tablespoonful of salt, add gradually a quarter of a pint of boiling cream, or the yolks of two well beaten eggs, in which case omit the flour; two tablespoonfuls of velouté or strong white stock, and a teaspoonful of powdered sugar; mix well and serve in a hot dish with light brown sippets of fried bread or puff-paste, baked in fanciful devices.

SPINACH BOILED.—Pick the spinach leaf by leaf, then take off the stalks and thoroughly wash the leaves in five or six waters, or they will be, as is too often the case when carelessly prepared, gritty. When you are sure that every particle of mould is removed, drain in a cullender, and put the leaves into a large saucepan with a tablespoonful of salt and a pinch of soda sprinkled over them, then add a quart of boiling water, press the leaves down, and boil quickly ten minutes, stirring frequently. When done, strain and press carefully, as

this vegetable retains the water more than any other. This is the plain, and in general, the best way of sending spinach to table, as it preserves the true flavour of the plant; but if you wish to make it richer, after straining and pressing, put the spinach on a board, chop it fine, and place it in a stewpan with an ounce of butter, half a teaspoonful of pepper and salt (in equal quantities), stir well until the butter is absorbed, turn into a hot dish, cut the pulp into small squares or diamonds, and serve with poached eggs and slices of fried bacon; garnish with sippets of fried bread.

SPINACH, CULTURE OF.—The varieties of spinach, being annuals, must be grown from seed. The leaves are required during the whole of the year, therefore successive sowings become necessary. A small sowing may be made in January, if the weather is mild, a larger sowing in February, and a still larger one in March. Sow afterwards once in three weeks, till the beginning of May, then every week till the end of July. Three sowings should be made in August, for winter and spring use, say during the first, second and third week. The seed vegetates in from ten to fifteen days, according to the season; therefore it may be advantageously sown between rows of newly-planted peas, beans, cabbage, or the like, as it will be fit to cut off for use before they either injure it, or it prove an impediment to their growth. And when so sown, the drills should be made nine inches wide and the seed thinly sprinkled in them, to give the plants greater room than if sown in the ordinary manner. The germination of the seed may be hastened by steeping it in water three or four hours previous to sowing; and in sowing during the heat of summer, when the ground is dry, the drills should be soaked with water before the seed is sown. It should always be sown in drills two inches deep and eighteen inches or two feet apart for principal winter crops, the plants being, after they come up, thinned to a foot apart in the line. As the object is to have large succulent leaves, the ground cannot be too highly manured. One ounce will sow a hundred and fifty feet of a single drill. The summer crops should be abundantly supplied with water during dry weather, the plants only moderately thinned, as their duration is short. In November it will be well to thin the plants intended for a winter and spring crop, to clear the ground completely of weeds, and to cover the spaces between the rows with finely sifted coal-ashes, to counteract damp and to render the ground more comfortable to tread upon during the process of gathering the crop. This also saves the large lower leaves from being splashed with mud during heavy rains. In light sandy soils spring crops come into use soonest, but they equally soon shoot up to seed and become useless. In strong retentive soils they are later and continue longer. In medium good garden soils, abundantly manured, the crops succeed best; and it is of importance, particularly for crops to come in during winter and to continue on till spring, that the

situation chosen be open and well exposed. In taking the crop, the larger and lower leaves should be gathered first, and then should either be cut off with a knife, or pinched off between the finger and thumb close to the bottom of their footstalks. The summer crops, as they grow so rapidly, may be cut close to the ground with a knife preparatory to being dressed, the footstalks of the leaves should be cut off and the leaves sorted, removing all the flower-stalks, should any exist, and rinsing the whole in fresh water, placing them afterwards in a clean basket to allow the water to drain from them. In sowing seed, as soon as the flowering is past, the male plants, which will then have performed their office, should all be removed, to admit air and light to the female plants to enable them to perfect their seeds. The seed ripens in August and September, and, after being dried for a week or so in the straw, should be thrashed out. Birds are extremely fond of spinach-seed, so much so as to render it expedient to cover the seed crop, if upon a limited scale, with netting, from the time the plants come into flower, until the seed is ripened. The seed retains its vegetative properties about four years.

SPINACH PUDDING.—Scald and chop some spinach very fine, together with four ounces of biscuit soaked in cream, the yolks of eight eggs beat up, a quarter of a pound of melted butter, a little salt, and nutmeg, and sugar to taste; beat it up all together, and set it over the fire till it is stiff, but do not let it boil. Cool it and bake it in puff-paste; or butter a basin and boil it.

SPINACH SOUP.—Shred two handfuls of spinach, a turnip, two onions, a head of celery, two carrots, a little thyme and parsley; put all into the stewpan with an ounce of butter, and a pint of veal stock, or the liquor in which meat has been boiled; stew till tender, pulp through a coarse sieve, add a quart of fresh water, salt and pepper, and boil all together. Make some small suet dumplings the size of a walnut, put them into the tureen, and pour the soup on hot.

SPINAL AFFECTIONS.—Though the symptoms of this class of diseases appear extremely complex and numerous, there are in reality but two diseases affecting the spinal column, that in this work call for any special observation, and these are, a distortion forwards, or *anterior curvature*, in which the back-bone bends inward, leaving a considerable hollow in the back; and a distortion to the side—generally to the right—and known as *lateral curvature*, in which the back-bone becomes more or less doubled on itself, as in the shape of the letter S, or, more frequently like the italic f. The anterior, or forward curvature, is the result of a diseased condition of the vertebrae, or the intervening cartilage, which in consequence, no longer able to support the weight of the body, is forced out of the perpendicular, and pressed inwards; shortening the stature and deforming the chest and back. Such a disease is the result of a scrofulous habit or an hereditary constitutional taint; and either deve-

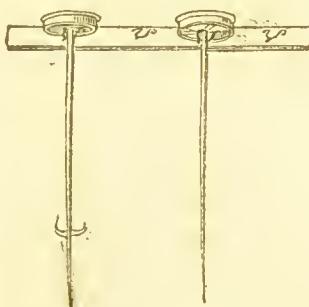
lopes itself in infancy and childhood, or it makes its appearance at the age of puberty. The most effectual treatment for this form of spinal disease, is a system of counter-irritation, local and general tonics, change of air, rest, and mechanical support. The application of moxa every month or six weeks, for two or three times; a succession of blisters, or a seaton, are the means by which the first intenitio of the physician is obtained; accompanied by perfect rest, a generous diet, and quinine and wine, and as the strength and capability for motion returns, sea-air, salt-water bathing, and a pair of properly fitting stays. Lateral curvature proceeds from general debility, especially from a loss of muscular power in the back, from long sedentary habits, and often from tight and injudicious lacing; for this form of diseased spine is far more frequent in females than in males: it is also very often induced by rickets, or makes its appearance in weakly constitutions, after an attack of measles or scarlet fever. The first observable indication of a curvature, is an enlargement of the breast; appearing when contrasted with the other to be deformed, or else the right shoulder assumes a marked disproportion, and seems to stand out from the spine. Concurrent with one or other of these effects, is a gradual distortion of the left hip, which grows outward, and becomes as far removed from the line of the spinal column on that side, as the opposite shoulder is from that; the consequence of this displacement of the hip, is, that the leg appears shorter, while the vertebrae of the neck sinking, gives a one-sided and constrained position to the carriage of the head and neck.

Treatment.—In this disease, or more properly affection, a moral and physical course is more absolutely indicated than a medical one; for if taken in time many of those afflicted may be permanently cured. The first and most imperative obligation, is a well-regulated system of exercise, which by calling into play the opposite set of muscles may serve by their action, in the first place, to arrest the further advance of the disease, and secondly, to draw back into their natural position, the displaced members. Before, however, exercise is adopted, and continuously through the whole course of treatment, a stimulus must be applied to the weakened muscles of the diseased parts: this stimulus is friction, or in other words, rubbing. Twice a day—for at least ten minutes each time—the back, shoulder, and hip, must be rubbed with an embrocation of either common olive oil, or one part of turpentine to three of olive oil, rubbed in with energy and continued with zeal. This, with country air, a good and nutritious diet, and the exhibition of steel wine, and tonics, is to be adopted for some time prior to resorting to exercise; the patient reclining on a hair mattress till a sufficient degree of strength has been obtained, when in addition to these means must commence the following system of graduated exercise:—The patient to draw frequent and deep inspirations, while

seated; to do the same standing, the arms elevated over the head; the same with the arms down, and then extended horizontally. The patient sitting, to move the feet up and down, next, deep and slow inspirations while lying on the left side, on the elbow; rising and lowering the body several times in this position; then walking slowly across a well ventilated room, and drawing full inspirations. Fixing the weak hand above the head and bending slowly, carrying a light weight in the weak hand, declaiming a set piece, or singing a song in an erect position, without moving. Using the weak arm, by imitating mechanical work, as sawing, hammering, or planing. Drawing upon a spring with the weak hand, and accustoming it to grasp and resist. Finally, lifting the body from the bed by the assistance of the arms, and using the body to sit up without any aid from the hands. These several evolutions—allowing a few minutes to each—should be gone through in regular order, twice every day, in a large well-aired room, the inspiration being drawn slow, deep, and steady. When the strength has improved, and the physical tone warrants the change, a system of out-of-door exercise, muscular and progressive, is to be adopted, till the health is restored and the growing deformity corrected.

SPIRITS, ADULTERATION OF.—See BRANDY, GIN, &c.

SPIT RACK.—In the culinary department this is a contrivance to hang spits



upon after they are cleaned and are ready for use.

SPITTING OF BLOOD.—This, though a serious symptom, is often productive of more alarm, than is justified by the amount of blood ejected, which, as is sometimes the case, comes from some minute vessel in the lining membrane of the trachea; though in general the blood spit from the mouth, proceeds from the lungs, and is distinguished from that discharged from the stomach, in being smaller in quantity, and more bright and frothy than the other. Spitting of blood frequently occurs after some strong muscular exertion, or results from a blow on the chest, and when not a sequent of long and severe cough, or occurring in a narrow-chested or weakly

constitutioned person, need create but little apprehension. Spitting of blood, is often preceded and accompanied by pain, and a sense of constriction in the chest, with a quick, sharp pulse, flushed cheeks, and an irritating cough. In any case, absolute rest is necessary, the patient should lie on his back, and while the feet are kept warm the hands and upper part of the person should be preserved cool, the patient taking from fifteen to twenty drops of the elixir of vitriol in a little water every two or three hours; and if the spitting continues, a dose of Epsom salts are to be taken, and one of the following pills every two hours, accompanied with frequent draughts of vinegar and water, lemonade, or buttermilk:—

Take of

Sugar of lead	15 grains.
Ipecacuanha	4 grains.
Opium powder	3 grains.
Extract of henbane, enough to make into a mass,	

which is to be divided into six pills. In severe cases it may be necessary to bleed, and apply a bladder of ice to the chest, and possibly a blister.—See BLOOD.

SPLEEN.—This organ, known as the milt, and always referred to as the seat of a pain in the side, from running or any violent exertion, has never yet had a proper use assigned to it. The Romans, believing it prevented a runner's speed in the gladiatorial course, were in the habit of extracting it from their *athletes*; but, with what result, is not known. It has long been the prejudiced opinion to attribute the peevish, irritable disposition of men to this organ; but till we know—which as yet we do not—what function the spleen performs in the human economy, it would be more just to attribute a man's ill temper to the fault of his disposition, than to an organ, whose use in the animal body is still a mystery. The spleen, like the neighbouring digestive organs, is subject to inflammation, enlargement and softening, and its treatment in each is of the same nature and order.—See LIVER.

SPLINTERS, TO EXTRACT.—When splinters are extracted immediately, bad consequences seldom ensue. But the more certainly to prevent any ill effects, a compress of linen, dipped in warm water, may be applied to the part; or it may be bathed a little while in warm water. If the splinter cannot be extracted immediately, or if any part of it be left in, inflammation will probably ensue, and nothing but timely precaution will prevent it coming to an ulcer. A portion of shoemaker's wax, spread upon leather, draws these punctures remarkably well. When the splinter does not make its presence known until inflammation is felt, and no advice can be procured, the steam of water should be applied to it at first, and then a poultice of bread and milk, with a few drops of Peruvian balsam. The injured part should also be kept in an easy position.

SPONGE.—A marine production, chiefly brought from Turkey. The finest quality is imported from Smyrna. Another, called West Indian or Bahama sponge, is much less esteemed, being coarse, dark coloured, and very rotten. When sponge first comes over, it has often a great deal of sand in it, which must be carefully cleaned out. The great use of sponges for bathing and fomenting affected parts of the body is well known; but the sponge used should be of the finest description, and entirely freed from any gritty particles. When sponges are done with, they should be squeezed dry and placed in an oiled silk bag made to receive them. By this means they will last much longer, and in better preservation than when suffered to lie carelessly about, with the water in them. Good sponge is an expensive article, and a high price must not be begrimed for a piece of superior quality and size. Above all, purchasers should beware of buying cheap pieces of sponge of street vendors; such pieces frequently having done duty in stables, and being capable of communicating diseases with which the horses have been affected.

SPONGE BISCUITS.—Beat together, for half an hour, four well-beaten eggs, and half a pound of finely-powdered loaf sugar: then mix in lightly, six ounces of dried and sifted flour, and the grated peel of a lemon, or a teaspoonful of essence of lemon, with a tablespoonful of rosewater. Flour the pans, fill them half-full, and sift powdered sugar over them. Bake them in a quick oven. Potatoe flour may be substituted for wheat flour.

Eggs, 4; sugar, $\frac{1}{2}$ lb.; flour, 6 ozs.; lemon-peel, 1; rose-water, 1 tablespoonful.

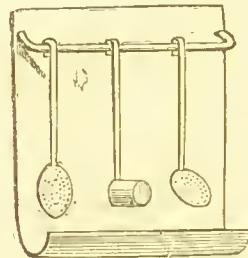
SPONGE CAKE.—This cake may be made in the following ways:—1. Take sixteen ounces of finely-powdered loaf sugar, eight eggs, and twelve ounces of dried and sifted flour; then whisk the eggs, yolks and whites, nearly half an hour; beat in the sugar with a horn spoon, and, just before it is to be put into a buttered tin, stir in the flour lightly, adding a few caraway seeds. Bake it for one hour. 2. Take the juice and grated rind of a lemon, twelve eggs, twelve ounces of finely-pounded loaf sugar, the same of dried and sifted flour, then with a horn spoon beat the yolks of ten of the eggs, add the sugar by degrees, and beat it till it will stand when dropped from the spoon; put in at separate times the two other eggs, yolks and whites, whisk the ten whites for eight minutes, and mix in the lemon-juice, and, when quite stiff, take so much as the whisk will lift, and put it upon the yolks and sugar, which must be beaten all the time; mix in lightly the flour and grated peel, and pour it all gradually over the whites; stir it together, and bake it in a buttered mould or small tins. Do not more than half-fill them. 3. Three-quarters of a pound of loaf sugar, a quarter of a pint of water, boil the sugar and water, skim it well; six well-beaten eggs, pour in the sugar boiling hot, whisk it till cold; seven ounces of flour well dried, mixed in gradually with the grated peel of a lemon.

The above should be put into a cake tin, well buttered and lined with buttered paper. It must be immediately put into a moderate oven, and baked three-quarters of an hour. This sponge cake will keep moist and good for weeks. 4. Take one pound of dried flour, three-quarters of a pound of finely-pounded loaf sugar, seven eggs, the yolks and whites beaten separately, the grated peel and juice of a lemon, a tablespoonful of rose-water, and one of brandy, and half an ounce of caraway seed, dried and pounded; beat all for an hour with the hand; butter a tin, line it with paper also buttered, put in the cake, and sift powdered sugar over the top. Bake it for an hour. Potatoe flour may be substituted for wheat flour in this and the other sponge cakes.

Loaf sugar, 1lb.; eggs, 8; flour, 12 ozs.; caraway seeds, a few. 2. Lemon, 1; eggs, 12; sugar, 12 ozs.; flour, 12 ozs. 3. Loaf sugar, $\frac{3}{4}$ lb.; water, $\frac{1}{4}$ of a pint; eggs, 6; flour, 7 ozs.; lemon-peel, 1. 4. Flour, 1lb.; loaf sugar, $\frac{3}{4}$ lb.; eggs, 7; lemon, 1; rose-water, 1 tablespoonful; brandy, $\frac{1}{2}$ tablespoonful; caraway seeds, $\frac{1}{2}$ oz.

SPONGE, TO CLEAN.—Immerse it in cold buttermilk, let it soak for a few hours, and wash it out in clean water; it will be perfectly clean and soft.

SPONN-DRIPPER.—This belongs to kitchens and sculleries. It is used for hanging large spoons and ladles on, with a



trough below to catch the drippings, that they may not soil tables if laid on them. It is made of tin, and fixed against the wall.

SPOONS.—These well-known domestic utensils are made of various sizes and in every material. In addition to the ordinary teaspoons and tablespoons, it is always well to have other spoons applicable to certain uses, such as wooden ones for mashing vegetables, iron ones for basting, horn ones for condiments, spicess, &c.

SPORTING.—Under this general term is to be considered chiefly the practice of shooting in connection with field sports. The choice of a gun is an important consideration. In making the selection, the following principles may be safely acted upon. The length of the barrel should be from twenty-eight to forty inches; and if either above or below these dimensions, the range of the shot will begin to fail. The fowling-piece to be recommended for general use is a double-barrelled detonator, weighing about eight pounds, the barrels thirty to thirty-two

inches in length, sixteen gauge, and made of twisted stubs. Single-barrels for general use, may be thirty-four inches long, and fourteen gauge. If selected for partridge-shooting only, the barrels should be thirty-inches long, and sixteen gauge; or a single barrel, thirty-four inches and fourteen or fifteen gauge. If selected for cover-shooting only, the barrels should not exceed twenty-eight inches by sixteen gauge; a single barrel, thirty-two inches and fifteen gauge. The stock of the gun should be exactly fitted to the shape of the shooter. On putting a gun to the shoulder, there should be no straining of the neck to take aim. When the eye is fixed upon a distant point and the gun raised to the shoulder, the object aimed at, the sight at the muzzle, the centre of the breech, and the eye should all be in a direct line without further adjustment. To ascertain whether or not the shape of the stock is that best adapted for the shooter, he should in this manner frequently raise the gun to his shoulder, and take aim at a distant point with both eyes open; then, closing the left eye, he will perceive whether or not he has mechanically taken a correct aim. If, with the left eye closed, he does not see the object, the stock is too crooked; if he sees all the rib, it is too straight; and if his line of aim is not along the centre of the breech, but from the left corner of it, the stock is not properly cast off. Should the line of aim be along the right side of the breech, the stock is too much thrown off. With a gun properly fitting, the aim is instantaneous; and the sportsman, if not naturally a good shot, is greatly assisted in the field. A gun of the proper shape may be chosen among others very easily by the above simple means of ascertaining that it carries a correct aim to a given object with both eyes open; and with such a gun, the shooter will acquire a practical dexterity in the field otherwise quite unattainable. When a stock is too much bent, the muzzle is depressed, and it is therefore preferable to have the stock rather straight; and it is a safe rule that in looking along the rib you distinctly see one-third of the whole length next the muzzle, as well as the sight. This gives the shot elevation and increases the range. The wood of the stock should be hard and tough: walnut is the best. The mounting and locks should be carefully fitted into the wood. In shape, the stock should be thin and well suited to the grasp, immediately behind the locks, where it is termed the handle. From that it should rapidly swell backwards, and acquire its greatest thickness immediately behind where the butt succeeds to the haudle. The fore-end of the stock should be broad and full, wide at the end of the lock plates, and may be chequered or not in the same manner as at the handle. The lock is an essential part of the gun; it should be as simple as possible in its construction, but filed in all its parts to perfection. The main-spring should be lively in action, and depend less upon quantity of metal for its strength than upon width of expansion when released from its confinement, and

great care in tempering. The tumbler and sear should be carefully bound down by the bridle, and be justly fitted to each other. To test a good lock draw up the striker with the thumb, and observe that there is no grating or roughness—that it rises freely with decreasing power—and that it "speaks" well, with a clear sound at half and full cock. Draw the trigger, retaining the thumb upon the striker, and observe that it goes down freely, with increasing force, as it approaches the nipple. The trigger should be long and well curved, affording a good hold for the finger. The edges should be rounded, so as not to cut the finger in firing, and they should be set well separate. For nervous persons who have any hesitation under the excitement of shooting, in choosing the proper trigger, the right-hand one may be chequered, thus giving a distinguishing mark. The guard of the trigger, termed the bow, should be rounded and somewhat thick at the edges, and have no improper projection likely to injure the middle finger in firing.

The most marked improvement in the construction of fire-arms for sporting purposes, is that known as the *breech-loading gun*. The advantages of this invention are the extreme facility, quickness, and great additional safety in loading, the increased rapidity or sharpness and strength of shooting, absence of foulness, recoil, and less liability to be affected by wet or damp. The principle upon which this gun is constructed is as follows:—The barrels are united to the stock by the main pin (a stout screw, which does not require to be removed in taking the gun to pieces), forming a kind of hinge, and held in their proper place by a bolt, connected with the lever, which fits into a stout steel socket, forged on to the barrels, and holds them firmly in their place when ready for firing. By turning the lever a quarter turn to the right, the bolt is released from the steel socket, and the barrels being set at liberty (turning on the main pin), drop with their own weight. The cartridges are put in the barrels raised; the lever turned back into its place, and the gun is ready for firing. The cartridge, which in itself contains all the requisites for the gun's discharge, is a thick paper cylinder, about two inches in length, and exactly fitting the bore of the breech, closed by an impermeable brass or copper capsule, in the middle of which is a small brass chamber, firmly supported in its place by a roll of paper about an eighth of an inch in thickness. A brass pin passes into the capsule and chamber, and holds the cap in the same way as a common nipple, and when placed in the barrel receives the blow of the striker, and explodes the charge. The rapidity of loading may be imagined, when twelve shots can be fired in a minute; and no foulness accumulates—the remains of the burnt powder being driven through the barrel with every succeeding shot as the thick elastic wad which fits in the breech end is two sizes larger than the muzzle; and, consequently, after the thousandth round the barrels are as clean and free from lead as they were

after the first discharge. In using the breech-loading gun, place the stock under the arm, and with the right hand pull the lever back, and ease down the barrels with the left hand. Take out the exploded cartridges with the thumb, or should they be rather tight (which is rarely the case), tap the pin with a loaded cartridge, or draw them out with the small instrument made expressly for the purpose. When loading, pour the powder and shot into a basin. Use the small brass measures, and first put in a measure of powder, then a felt wadding, next the shot, and a card wadding, and turn the end of the paper over, to secure the wadding, with a screw-press socket. For cleaning, on returning from shooting, wipe out the barrels with dry tow, then grease them slightly with an oiled rag, taking care not to injure the breech end of the barrels by placing them on stones, as the nicety of fitting may be destroyed. The barrels need not be taken off the stock in cleaning. Mr. Joseph Lang, the eminent gun maker of 22, Cockspur Street, London, has done more than any other person to enforce the superiority of the breech-loader upon the attention of the sporting public. We have shot with a breech-loader of his make, and can testify to its killing effectiveness at an unusual range; and that for safety, quickness, cleanliness, and execution, no gun can compare with the breech-loader.

The various processes in the practice of shooting may now be summed up. No small portion of success in shooting depends upon the method of *loading a gun*. All general rules on the subject must be laid down with several qualifications and reservations. It is recommended to squib off the gun at the commencement of each day, that it may dry and warm the barrel, and absorb any moisture that may be collected in it. Having drawn up the cock and removed the broken cap, or wiped the edge of the flint, if that is used, hold the gun upright, and in that position pour in the powder, striking the butt-end of the piece against the ground, to carry down such grains of powder as may be lodged against the sides of the barrel, and also to settle the mass. Next, pass the powder-wad down until it reaches the powder, on which it ought to be pressed as tightly as possible. This done, pour down the shot, and give a shake or two to settle them evenly and solidly in their bed. Place over them wadding of sufficient substance and elasticity to maintain the shot steadily in their position, for which purpose, give a pressure to the wad, but do not ram it hard. The first charge, however, may be pressed a little harder than the subsequent ones. It may be proper when the powder is wadded, to observe whether it makes its way into the nipple by the pressure of the confined air, made in passing down the wad. It does not always follow, that if the powder is not seen on the pivot, it will not explode; it is, nevertheless, more satisfactory to see it there; and when it cannot be seen, the breech should be slightly tipped, to introduce the powder further up to the touch-hole. The last act of gun-loading is that

of putting on a fresh cap, and letting the cock down very gently to fasten on the nipple. In charging the flint gun, it is also prudent to squib it first, and then introduce the powder and shot into the barrel. If a double gun be employed, it will be optional with the sportsman to load both barrels alike, or to give a somewhat heavier charge to the second barrel, he it left or right, that the gunner usually fires on the longest shots. If the quantities of powder used are the same in both barrels, the size of the shot may at least be somewhat larger for the second barrel. When a gun has been discharged, it is a good practice to load it immediately, while the barrel is still warm; for when allowed to cool, and moisture begins to settle on its inner surface, it catches some of the finer particles of the powder-charge, and either decomposes them there, or prevents them falling to the bottom; and in either case the detention diminishes the projectile force which is to act on the shot. In order to obtain a complete mastery over the gun, the young beginner should proceed in something like the following order:—Let the handling and shouldering of the gun be expertly acquired in its unloaded state, taking care to regard its height, length of arm, and inclination of shoulder of the pupil. This practice should be gone through for an hour or two at a time for some days, until complete familiarity with all the required movements is attained. He should be expert at raising or depressing his gun to every kind of level, and taking an aim at various objects. To hold the gun firmly to the shoulder is an important consideration. It is likewise recommended to place the left hand close, or nearly so, to the trigger, as this prevents, in a great measure, any danger from the bursting of the piece. To cultivate a steady and decisive mode of walking and standing, is very advantageous for successful shooting. Anything like trepidation and an indecisive gait are inimical to successful sport. A firm placing of the limbs greatly assists the arms in readily and gracefully elevating and presenting the gun. The gun should be carried barrel upwards, and sloped towards the left arm, the lock being clasped by the hand of that side, the fingers embracing the stock, which allows the arm, though supporting the gun, yet to do it with readiness and ease, and to be placed with facility within the grasp of the hand previous to the meditated elevation. In the act of cocking, the forefinger should quit the front of the trigger, and extending itself sloping forward through the guard, only feel the side of it with a gentle pressure. The body, by this action of throwing out the butt, combined with the step-out of the left leg in taking form, will be brought with its weight principally upon that limb; a position assumed as more immediately called for, when the flight is nearly in a line from the gunner, or to the left, which will comprise four out of five of all the shots. Again, when the word *present!* is used either audibly or mentally, the following directions are given. Let the

barrel at this moment, inclined over the left shoulder, be swept in a circle forwards with a smart motion, the forefinger of the right hand (moving as directed above) being as it were the centre of motion upon which the gun turns during the sweep; by which action, the butt should be raised nearly to its full height, and then bring it back with a sharp motion into its place within the shoulder; whilst at the same time, an increased grasp with the left hand, which till now has kept its hold very loosely, combines with that of the right hand upon the gripe of the stock, to keep it firmly there. *The direction of barrel to the mark,* or what may be termed the line of level to be taken, in the first instance, is a little below what, as already drawn by the eye to the object, may be distinguished by the name of the line of sight. The latter should be firm and immoveable, to which a precise adjustment of the line of level must be firmly made by an easy flexure of the upper part of the body altogether, but without any loosening or twisting of the butt from its firm hold within the shoulder; and on the instant that these two lines are brought into contact, bear direct upon the object. Before an object crossing, the aim should be full high for a bird rising up or flying away very low, and between the ears of hares and rabbits running; it should be straight away; all this in proportion to the distance; the shooter rarely erring by firing at the crossing bird when at forty yards, at least five or six inches before it. As the barrels of double guns usually shoot a little inwards at long distances, there is so far a preference in favour of the right barrel for an object crossing to the left, and *vice versa*. Till the pupil is fully master of these intricacies, he will find great assistance from the sight, which he should have precisely on the intended point when he fires; he will thus by degrees attain the art of killing game in good style, which is to fix his eyes upon the object, and fire the moment he has brought up the gun. The shooter should accustom himself not to take his gun from his arm till the bird is on the wing, and never to vary his eye from the very one it first fixed upon. Another good rule is, that as soon as the eye bears on the object to be fired at, provided that the muzzle of the gun does the same, then it is proper to fire; for when the eye dwells too long, the distance becomes increased, and the sight is impaired. To kill birds flying across either to the right or the left, allowance must be made by the shooter not only for the distance he is from them, but also for the strength of the birds and the velocity of their motion; thus, it must be taken into account that the flight of a partridge in November will be greatly accelerated to what it was two months before. It may also be mentioned that in a cross-shot to the right, the difficulty is very much increased if the right leg is first when the birds rise; the gun cannot then be brought but a very trifling way beyond a straight line to the right. When dogs point, or when game has been marked and expected to

spring, the walk should be with short and easy steps; the body can then be easily turned upon the legs, as if on a pivot, and the range of the bird commanded even if it should fly quite round the sportsman. The science of aiming accurately, however, will be of little service, except the gun he held steady from all starting or flinching in the act of firing. *Shooting in company* has given rise to a code of laws for the government of sportsmen. All birds that cross should be considered as belonging to the gunner to whose side their heads are pointed, unless a previous understanding is come to, that either party may take an after-shot at a tailing bird. When single birds rise and go away fair from either party, it may be proper to have it previously understood that such should be taken alternately by each shooter. The following *precautionary observations* should also be attended to:—A gun should always be held with the left hand, and close to the guard; all the requisite standing for taking aim, and even of motion, in following the flight of a bird can be obtained in this manner, if the piece be of the heaviest description. With double-barrelled guns, the shooter, when he fires one barrel, should uncock the other, previous to re-loading. The carrying of a gun in a safe position, cannot be too strongly insisted on. The sujoined items of advice in connection with sporting generally, will be found useful. If you or your dog should at any time receive a severe blow, foment the injured part instantly with water, as hot as it can be borne, for at least half an hour. If you burn yourself in shooting or otherwise, wrap the part affected immediately in cotton. If you should take cold, and the inflammatory process appears rapid, bathe your feet in hot water; and add salt, or bran, or both, if procurable. Get into a warm bed, and take some whey, or other drink promoting perspiration. Never fast too long, and avoid, if possible, excessive fatigue. Never venture out with an empty stomach, particularly in the morning. Should you wish to rise early before any of the household are stirring, you can have a crust of bread or biscuit, with a glass of milk set aside for you over night. Avoid having recourse to the excessive use of spirits; a little taken occasionally will not, however, prove hurtful. Never sit down with wet feet, nor with wet clothes on any part of your body; if a change cannot be procured continue walking about, or, what is better, go to bed until some dry clothes can be procured; or, if you wish to start again, after taking refreshment, first wet your feet with spirits or essence of mustard, and take your refreshment as quickly as possible. To keep the body warm, dry, and comfortable is the surest plan of increasing sporting pleasures, and of making them really conducive to health.

The comfort of the head in shooting is a very great consideration. The "Sportsman's Cap," manufactured by Mr. Joseph Birkhead, 4, Cheapside, London, is a *millum in parvo*. It is made of horse-hair, and is light and cool; in fine weather the front

tippet may be turned down, forming a peak to shade the eyes; in dull weather, and in close cover, the peak may be turned up, and be out of the way. In wet weather the lappets front and back may be turned down, to keep the rain from the face and neck. It may be worn in the style of the Scotch cap, the pointed ends being front and back; or of the French cap, the ends being at the sides. In a railway train, it forms a good lounging cap, and at the opera it may be doubled up in the pocket, or be sat upon without injury or inconvenience. Mr. Birkhead forwards these caps free by post in return for six shillings' worth of postage stamps.—See BLACKCOCK, GROUSE, GUN, GUNPOWDER, PARTRIDGE, PERCUSSION CAP, PHEASANT PIGEON, POINTER, POWDER FLASK, SETTER, SHOT BELT, SNIPE, SPANIEL WADDING, WILD-FOWL, &c.

SPRAINS AND STRAINS.—These two words, in a medical sense, have exactly the same interpretation, and mean precisely the same thing. A violent contortion, straightening or wresting of the tendons, sinews, or leaders of the muscles from their natural state, caused by some sudden accident, and accompanied by considerable pain, and often discolouration and swelling. Sprains or severe stretching of the sinews, may occur in the course of *any muscle*, though they chiefly take place over joints, such as at the shoulder, wrist, knee and ankle, and are produced by any cause that completely or partially dislocates the joint, or preternaturally elongates the muscle. For severe sprains attended with swelling, if over a joint, it will be necessary to apply from six to twelve leeches, and encourage the bleeding by a hot poultice continued for the space of an hour, after which time, a lotion made as follows, and used hot, should be applied frequently or every two or three hours, till the swelling is reduced and the part assumes a mottled and yellowish appearance. Take of—

Sal-ammoniac	½ oz.
Sugar of lead	½ oz.
Dissolve in	
Camphor water	20 ozs.
And add	
Vinegar	4 ozs.

Mix. Make hot, and apply by means of a napkin, or fold of flannel. When the swelling has been subdued and only a stiffness of the joint and weakness remains, the part must be rendered supple and strengthened by repeated friction with the hand, and any simple substance, such as oil or lard, rubbed well into the part two or three times a day. If this should not be sufficient, and as sometimes happens, a thickening of the part remains, an embrocation of the following ingredients is to be employed. Take of—

Camphorettet oil	2 ozs.
Oil of amber	½ oz.
Hartshorn	½ oz.

Mix. To be used two or three times a day. For milder cases of sprain, a simple fomentation of chamomiles and poppy heads, may be employed in the first place for a few

hours, till the pain is subdued, and the part afterwards rubbed with sweet oil or opodeldoc. Sometimes it is advisable to use the sugar of lead lotion, cold, and again alternated with it made hot, but as a general rule, over joints, it is best to use heat, and cold lotions to other parts.

SPRATS BOILED.—Put the sprats on a gridiron over a clear fire, sprinkle a little flour and salt over them, then turn in a couple of minutes, when the other side is brown take them from the fire, put them in a hot dish, and serve them up with melted butter.

SPRATS FRIED.—Clean and dry them thoroughly in a cloth, fry them plain, or beat an egg on a plate, dip them in it, and then in very fine bread-crums that have been rubbed through a sieve; the smaller the fish the finer should be the bread-crums. Biscuit powder is still better; fry them in plenty of clean lard or dripping; as soon as the lard boils and is still, put in the fish; when they are delicately browned, they are done; this will hardly take two minutes; drain them on a hair-sieve placed before the fire, turning them till quite dry.

SPRATS PICKLED.—Boil the sprats without taking off the scales in just enough liquor to cover them, do not over-boil them; when the fish is done, lay it slantingly to drain off all the liquor; when cold, pack it close in barrels or jars, fill them up with equal parts of the liquor the sprats were boiled in (having first well strained it), and good vinegar, let them rest for a day, fill up again, then head them down as close as possible.

SPRATS STEWED.—Wash and dry the sprats and lay them as level as you can in a stewpan, and between every layer of sprats, put three peppercorns, and as much allspice, with a few grains of salt, barely cover them with vinegar, and stew them one hour over a slow fire; they must not boil; a bay-leaf is sometimes added. Herrings or mackerel may be stewed in the same way.

SPRING SOUP.—Cut an equal quantity of carrots, turnips, onions, and leeks, stand them in some good stock; add some French beans, peas, beans, cucumbers, asparagus, lettuces, sorrel, and chervil, add a little bit of white sugar: let them reduce nearly to a glaze, then add to them some stock, thickened with green peas rubbed through a tamis.

SPRING VINEGAR.—Dry cress, tarragon, pimpernel, chervil, &c., in the sun, and then put into a pitcher with six cloves of garlic, as many shallots and onions, a handful of mustard seed, some cloves, coarse pepper, and a lemon cut in slices with the peel on; the pitcher, which should be large enough to contain five or six gallons, is then to be filled with cold vinegar, and stopped close; expose it for about a fortnight to the heat of the sun, then filter it, and bottle and cork it for use.

SPRUCE BEER.—Pour four gallons of cold water into a nine gallon barrel, then add four gallons more, quite boiling, and six pounds of molasses, with about eight or nine tablespooontuls of the essence of spruce,

and on its getting a little cooler, the same quantity of good old yeast. Shake the barrel well, then leave it with the bung out for three days; bottle in stone bottles, cork well, wire carefully, pack in sand, and it will be fit to drink in two weeks.

SQUAB PIE.—Prepare apples as for other pies, and lay them in rows with mutton chops. Shred some onion, mix with brown sugar, and sprinkle among them, then add a little pepper and salt, pour in a teacupful of water; having previously lined the dish as usual, bake it well.

SQUILLS.—This herb is a stimulant, a diuretic and expectorant. It is employed as an expectorant in coughs of long standing, bronchitis, and the advanced stages in whooping cough. As a diuretic it is given



in dropsies, combined with small doses of camomile, or blue pill; it should not, however, be given in dropsies, if there be any disease of the lungs or kidneys existing at the same time. As a diuretic it is generally given in the form of pills. In the form of ozymel of squills it is given to children labouring under whooping cough, in doses of from one to two teaspoonsfuls, three or four times a day; in powder the dose is from one to ten grains; if to act as an enetic, from ten to twenty grains are administered.

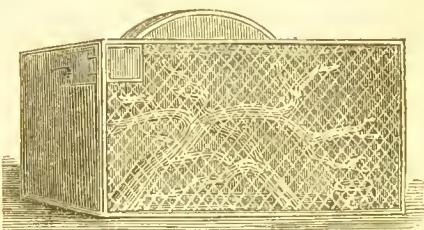
SCUINTING, OR STRABISMUS.—An affection of the eye, by which persons see objects in an oblique manner from the axis of vision. The cause of this distorted position of the eye, is owing to an unnatural contraction of a certain set of muscles, that move the eye-ball, and which being in a state of permanent spasm or contraction, draw the eye from its proper axis of sight. Modern science, among other benefits to mankind, has discovered a perfect cure for this very unpleasant deformity, and that by simply dividing the minute muscle, whose contraction caused the obliquity, when the opposing muscle at once draws the orb into its proper axis. As this is a strictly surgical case, in which professional aid is imperative, it is unnecessary to say more in this place

on a disease that can only be cured in adult age by the surgeon. When, however, it occurs in infancy, a cure is sometimes effected by making the child wear *goggles*, a kind of wooden spectacles, like the snow-eyes of the Esquimaux; or by tying up the sound eye, and compelling the child to look in an opposite direction for everything it requires, a cure is sometimes obtained; but with the assistance of chloroform, and the moral certainty of a cure by cutting the muscle, no one need now endure the annoyance of an obliquity of vision.

SQUIRREL.—This is one of the prettiest and most engaging of all domestic pets. The



cage in which it is confined should be at least six feet long and four feet high; it should also be provided with perches like the branches of a tree. There should be a sleeping-box, opening with a door behind, for the purpose of cleaning it; let there be also a food-box and water-pan, nicely adjusted. The edges of the cage should be covered with tin, or the animal will soon set himself at liberty with his teeth. The moveable or turn-about cage, so much in vogue, is an unnatural habitation, and conduces neither to the

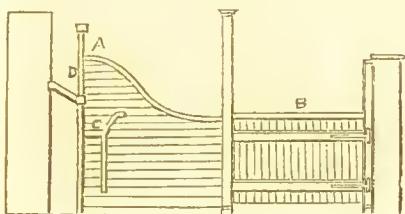


animal's health nor recreation. Squirrels may be fed on all kinds of fruits, particularly those of the nut kind, such as filberts, wood nuts, walnuts, almonds, acorns, beech-nuts; and they are very fond of the cones of the fir-tree. They will also sip milk, and eat bread and milk with avidity. Some squirrels are very difficult to tame; and when this is attempted, they must be taken from the nest at a very early age. With care, attention, and method, the squirrel may be brought to know, love, and obey his keeper, and to come at his call. They may be also taught a number of entertaining tricks.

STABLE MANAGEMENT.—The stable is an important building, as its selection, convenience, and general management greatly influence the health of the horse. The situation of the stable should always be on dry, firm, and hard ground, that in winter the horse may go out and come in clean; and, where possible, be built rather on an ascent, so that the refuse matter may run off and be easily conveyed away by drains for the purpose. The horse delights in cleanliness, and dislikes unpleasant odours; on this account no hen-roosts, pigstyes, or other nuisances should be near the stable. The walls of a stable ought to be of brick rather than stone, and should be made of a moderate thickness, two bricks or a brick and half at least, or the walls may be built hollow, not only for economy, but for the sake of warmth in the winter, and to keep out the heat in the summer. The windows should be proportioned in number to the extent, and made on the east or north side of the building, that the north wind may be admitted to cool the stable during summer, and the rising sun all the year round, especially in winter. They should either be sashed or have large casements, for the sake of letting in air enough; and there should always be close wooden shutters, turning on bolts, that the light may be shut out at pleasure. Sometimes the whole of the stable is paved with stone, but occasionally that portion on which the horse has to lie, is boarded with oak planks, which should be laid as even as possible, and cross-wise rather than length-wise; and there should be several holes bored through them, to carry off the refuse underneath the floor by gutters into one common receptacle. The ground behind should be raised to a level with the planks, and be paved with small pebbles. The depth of a stable should never be less than twenty feet, nor the height less than twelve. The width of a stall should not be less than six feet clear. But when there is sufficient room it is a much better plan to allow each horse a space of ten or twelve feet, where he may be loose and exercise himself a little. This will be an effectual means of preventing swollen heels, and a great relief to horses that are worked hard. With respect to the rack and manger, the former is preferable on the ground, rising three feet high, eighteen inches deep from front to back, and four feet long. The manger eighteen inches deep, eighteen inches from front to back, and five feet in length. The rack should be closed in front, as it is better adapted for saving hay. The back part of the rack should be an inclined plane, made of wood, gradually sloping towards the front, and terminating about two feet down. The advantages of this rack are numerous: in the first place, the hay is easily put into it, and it renders a hay-loft over the stable unnecessary. All the hay that is put into this manger will be eaten, whereas in the common rack it is well known that a large portion of the hay is often pulled down upon the litter and trodden upon, whereby a considerable quantity is often wasted. It

prevents the hayseed or dust from falling on the horse, or into his eyes. A great saying is also made in oats by fastening the horse's head during the time of feeding, that he cannot throw any of them out of the manger. This kind of rack and manger, from being boarded up in front, will effectually prevent the litter from being kept constantly under the horse's head and eyes, by which he is compelled to breathe the vapours arising from it. It will also prevent him from getting his head under the manger, as sometimes happens, by which means the poll-evil is frequently produced. The length of the halter should only be four feet from the head-stall to the ring through which it passes,—this will admit of his lying down with ease, and that is all that is required. The ring should be placed close to that side where the manger is, and not in the centre of the stall. The side of the stall should be sufficiently high and deep to prevent horses from hitting and kicking each other. When the common rack and manger are preferred, the rack-staves should be perpendicular, and brought nearly down to the manger, and this may easily be done without the necessity of a hay-loft, and the manger may be made deep and wide, as described. The window of the stable should be at the south-east end, and the door at the opposite end. The window should be as high as the ceiling will admit of, and in size proportioned to that of the stable. In one of twelve feet high, it need not come down more than four feet; it will then be eight feet from the ground, and out of the way of being broken. The frame of the window should be moveable upon a pivot in the centre, and opened by means of a cord running over a pulley in the ceiling, and fastened by means of another cord. With a window of this kind in a stable of three or four horses, no other ventilation will be required. A stable thus constructed will be found conducive to the health and comfort of the horses, and will afford an inducement to the horse-keeper to attend to every little matter that can contribute to cleanliness. Neither dogs, fowls, nor goats, should ever be permitted to enter a stable; and the manure heap should be kept at a distance from it. A good contrivance for cleaning horses is to have two straps, one on each side of the stall, about a yard from the head of it. By these the horse may be fastened during the time he is being cleaned, by which he will be effectually prevented from hitting the manger or the horse-keeper; and being kept back in the stable, the man will be better able to clean the front of his fore legs, chest, and neck, and be able to move round him. In Scotland, farm stables are constructed in such a manner, that all the horses stand in a line with their heads towards the same sidewall, instead of standing in two lines, fronting opposite walls. Those lately erected are at least sixteen feet wide within walls, and sometimes eighteen, and the width of each stall upon the length of the stable is commonly five feet. To save a little room, stalls of nine feet are sometimes made to hold two horses; and in that case, the manger and

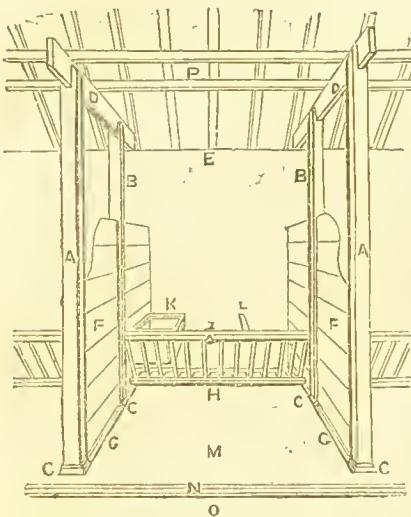
the width of the stall are divided into equal parts by what is called a half-travis, or a partition about half the depth of that which separates one stall from another. By this contrivance, each horse, indeed, eats his food by himself; but the expense of single stalls is more than compensated for by the greater ease, security, and comfort of the horses. The travises or partitions which divide the stalls, are of deal, two inches thick and about five feet high, but at the heads of the horses the partition rises to the height of seven feet, as shown in the engraving at A, and the length of the stall is usually from seven to eight feet. In many



cases the end stall has a door, or frame of boards, to fit in between it and the back wall, in order to enclose food of any kind, a sick horse in foal, &c. The manger is generally continued the whole length of the stable. It is about nine inches deep, twelve inches wide at top, and nine at the bottom, all inside measure, and is placed about two feet four inches from the ground. Staples or rings are fixed on the breast of the manger, to which the horses are tied. The rack for holding their hay or straw, is also commonly continued the whole length of the stable. It is formed of upright spars, D, connected by cross-rails at each end, and from two feet to two and a half feet in height. The rack is placed on the wall, about a foot and a half above the manger, the bottom almost close to the wall, and the top projecting outwards, but the best plan is to place it upright (C D A). The spars are sometimes made round, and sunk into the cross-rails, and sometimes square. Immediately above the racks is an opening in the hay-loft, through which the racks are filled. When it is thought necessary, this may be closed by boards moving on hinges. Behind the horses and about nine feet from the front wall, is a gutter, having a gentle declivity to the straw-yard. Allowing about a foot for this, there will remain a width of eight feet to the back wall, if the stable be eighteen feet wide; a part of which close to the wall is occupied with corn chests and places for harness. The temperature of the stable is a circumstance that requires particularly to be attended to. In general, there is a predilection for warm stables. Well-bred horses require a warm and genial temperature in the stables, supposing of course the air to be pure, to ensure the glossiness of coat, so essential to the beauty of the animal. But although it has this effect, a very glossy coat in winter is not

desirable; nature has a tendency to proportion the degree of fineness of the coat to the season, making it a little rougher in winter than in summer. The glossiness of the coat should be more the result of careful grooming than of unnatural warmth. The bad effect of hot stables is evident from the diseases frequently occasioned by taking horses out in the open air, particularly in cold weather, when the temperature is thirty or forty degrees below that of the stable. This is often the cause of rheumatism, catarrh, or inflammation of the lungs, when horses are kept standing long in the cold, notwithstanding that exercise keeps them warm for a time. It is also generally known that a sudden return to hot stables is nearly as dangerous as the change from a heated atmosphere to a cold and biting air. No horse in the stable should sweat under his clothing; by so doing he is rendered highly sensible to external impressions from alternation of temperature, producing a morbid irritability of skin, and consequently a greater susceptibility to many diseases; it also proves a relaxant. The heat of a well-regulated stable in summer should not vary from between sixty and sixty-five degrees; nor in winter much from fifty. Some have even found the advantage of accustoming horses to a cooler atmosphere by keeping them much in the open air. It is essential to learn to distinguish between merely heated and foul air; both of these being frequently confounded under the term *close*. But air may be warm without being in the least unwholesome, and may be cold and yet very foul; the wholesomeness for respiration not depending upon the temperature, but upon the gases which compose it, and the noxious vapours with which it may be contaminated. The temperature should be ascertained by a thermometer kept in the stables. The bad effect of hot stables is now pretty well understood, but still many do not know the difference between common and simply heated, and one heated and mixed with other noxious gases. It is easy to understand that the air which we breathe, becomes unfit for the support of life, when deprived of its vital principle through the act of respiration. It is necessary, therefore, to get rid of this foul air, so that it shall not be respired again, and to introduce fresh air that possesses the property so essential to life. The air of stables is not only deteriorated by the breathing of the animals, but it is further contaminated by emanations from the body, as well as by the noxious ammoniacal vapours, arising from the refuse. These vapours are hurtful to the lungs of the horse, and still more particularly to its eyes, and are frequently the source of blindness and other diseases. The most effectual mode of managing the ventilation of stables is by having large trunks or tubes of board, about a foot square, to pass through the ceiling and roof into the open air, leaving their tops covered in such a way, that the heated air can go out, but no rain can come in. If it is impossible to send them out through the middle of the ceiling, they may be carried out just beneath

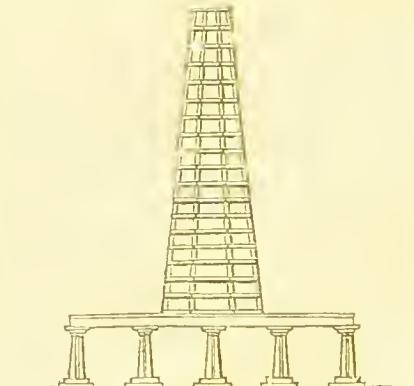
it through the wall; and it will be best if there be a tube to each stall; or windows with louver-boards, to be opened or shut as may be required, and placed at convenient situations. It is to be observed that no air can go out except an equal quantity be admitted to supply its place, as the stable must at all times be equally full of air; therefore, apertures for the admission of fresh air should be made somewhere at the lower part of the stable, where the draught will be least prejudicial. In a small stable, the bottom of the door will do for this, if a board be placed below the aperture in it



slanting, so as to direct the current of air that enters upwards, instead of it coming horizontally, which might strike upon the legs of the horses. In larger stables, where more fresh air is required, numerous small apertures are better than one large one, placed in such a manner that the air cannot reach the horses in cold currents, which may be injurious to them; they should also be so contrived that the air admitted may soon mix with the rest. The light of stables requires regulating, so that the horse is not plunged in gloom on one hand, nor dazzled by the light on the other. Windows should be placed high up in the stable, that the light may not come into the horses' eyes; and the glass should be in imitation of ground glass, to keep out the direct rays of the sun. When opened in summer, a net should be kept across the opening, to keep out the flies from annoying the horses. White-washing or lime-whiting the walls and ceiling of the stables is very proper on account of cleanliness; but, except the stable is rather dark, it is best not to make the walls quite white, but with a tinge of brownish yellow or stone colour, this being less glaring for the horses' eyes. For night, the best lights are candles, or lamps in lanterns. The gas-lights which are sometimes employed to burn continually in stables, are

extremely prejudicial, as they consume much of the vital part of the air, and sometimes suffer the carburetted hydrogen to escape unhurt, which is very injurious. The annexed engraving gives a view of the particulars of a *stable for work-horses*, fitted up with wooden travis-posts, which is yet the common method; A A are the strong hind-posts; B B, the head-posts, both sink into the stone blocks C C C, and fastened to the battens D D, stretching across the stable from the wall E to the opposite wall; F F, are the travis-boards, let into the parts A A by grooves, and passing between the two divisions of the posts B B; the boards are represented high enough to prevent the horses worrying one another; G G are curbstones set between the hind or fore posts A and B, to receive the inside of the travis-boards in grooves, and thereby secure them from decay by keeping them above the action of the litter; H is the sparred bottom of the hay-rack, the upper rail of which holds the ring I for the stall collar-shank; K is the corn-manger or trough; L the bar across the rack, to prevent the horse dragging out the fodder; M the pavement within the stall; N the freestone gutter for conveying away the refuse to one end of the stable; O the pavement of the passage behind the horse's heels; P are two parallel spars fastened over and across the battens, when there is no hay-loft, to support trusses of straw or hay, to be given as fodder to the horses in the evenings of winter, to save the risk of fire in going at night to the straw-barn or hay-house with a light.

STACK-FUNNEL.—This contrivance in connection with the building of hay-stacks



may be formed of a few poles placed on a circular, square, or angular base, and having a few short spars nailed across, or a straw-rope wrapped round.

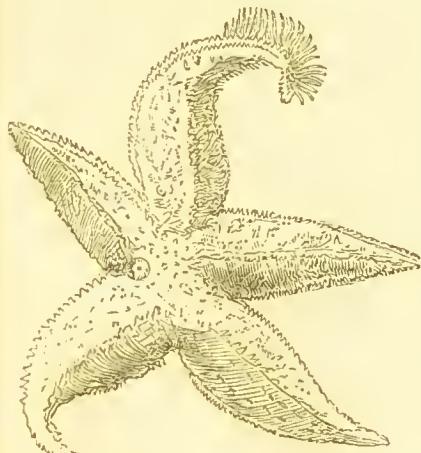
STAKE.—In horticulture, an implement employed for giving support to trees, shrubs, and plants. Iron stakes are of great variety, and are made of both east and malleable metal. Flat wrought iron stakes and wires are used for the support of peas and other annual plants. Iron stakes for roses are

sometimes formed with expanding heads, as seen in the engraving. When fixed in



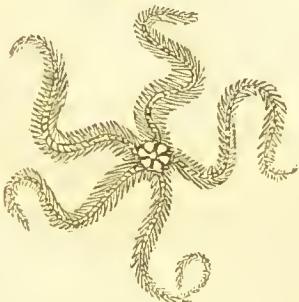
the ground, these stakes should stand an inch or two higher than the stock on which the rose is grafted. The branches of the graft may then be trained regularly to the spreading head of the stake.

STAR FISH.—These are among the most striking objects of the sea-shore, their curious and symmetrical forms attracting and inviting the attention of all observers of nature. The true star-fishes are either star-like, or angular, in form. They are covered with a tough leathery integument, which is more or less strengthened by a net-



work of calcareous plates, and in most species, with strung spines, variously arranged. Among and on the spines in many species, are curious pincer-like bodies. The

under surface of the body presents the mouth in the centre, and deep grooves radiate from it. These grooves contain extensive suckers, capable of adhering to the surfaces of the bodies by the means of a terminal disc. The usual number of rays is five; but there are various other numbers, from three to nine. In some the rays are long and slender, in others short and obtuse; sometimes covered with spines, or otherwise with smooth or



granulated plates. The brittle star-fish is one of the handsomest specimens, displaying in addition to its curious form, vivid hues, arranged in beautiful patterns.

STARCH, TO PREPARE.—Put two or three tablespoonfuls of starch into a bowl, and mix it gradually with just enough of clear cold water to convert it into a thin paste, pressing out all the lumps with the back of the spoon till it becomes perfectly smooth; then pour it into a clean pipkin or skillet. Have ready a kettle of boiling water, and, by degrees, add some of it to the starch, stirring it well. A pint or a quart of the hot water may be allowed, according as it is desired that the starch should be thick, thin, or of a moderate consistency. Set it on hot coals, and boil it thoroughly for half an hour. If not well boiled, it will fail to be glutinous. When it has boiled for about fifteen minutes, stir it a few times, for a moment each time, with the end of a spermaceti candle. This will prevent it becoming sticky. If a spermaceti candle is not at hand, sprinkle in a little salt, about a teaspoonful to a pint of starch, or throw in a piece of loaf-sugar. Finish by stirring it vigorously with a spoon. Strain the starch through a white cloth into a large pan, and squeeze into it a very little blue from the indigo bag; but it must be very little.

STARLING.—This is an amusing bird to keep; it may be taught various entertaining tricks, and even instructed to repeat short phrases, or to whistle tunes with great exactness. They should be taken from the nest when about ten days old, put into a basket with some clean straw, and kept warm. Whatever is desired to be taught them should be whistled or repeated to them at feeding time. In feeding them, the same food may be used as for the blackbird; they should be given five or six pieces at a time, about the size of a horse-bean. When they

can feed themselves, the food of the wood-lark, and a little flesh meat will, from

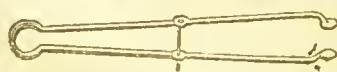


time to time, be necessary. To keep them in health, they should occasionally be given a spider or a meal-worm, and have a little saffron put into the water.

STARVATION.—Though this term implies death from either hunger or cold, it is in the former sense only that it is now popularly understood. As the human body can resist the ravages of hunger and thirst for a considerable time, the decay of vital energy is gradual, and always accompanied by a corresponding waste of the physical frame; consequently, the body of a person who has lost his life from a deprivation of sustenance, always bears upon it such characteristic appearances of gaunt emaciation, attenuated limbs, sunken eyes, and hollow temples, as leaves no doubt on the mind of the beholder as to the cause of death. In cases where, from long deprivation from food, a person is reduced to a state that might have eventuated in dissolution, great care is needed in administering nourishment, which in all such cases must be looked on as a medicine, and given in small and guarded doses; for the greater has been the exhaustion, the more prone is the patient to suffer from the re-action, that, sometimes, from a state of powerless prostration, rouses in a few minutes to delirious fury; the patient often sinking under the means necessary to pull down the feverish excitement induced by the means used to save him. Thin gruel, or mutton broth, slightly thickened with crumbs of bread, given in a few tablespoonfuls at a time, and repeated every ten minutes, is the best restorative and nourishment that can be given to a person long debarred from food. Even this must be withheld when the face flushes, and the pulse rises suddenly. Conjointly with the above form of nourishment, hot water must be applied to the feet, and sometimes a hot fomentation is necessary to the stomach.

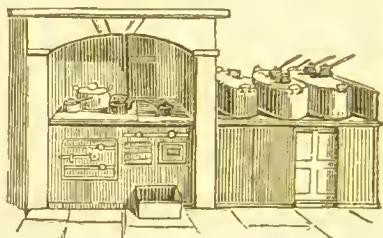
STEAK-TONGS.—For turning and re-

moving steaks while undergoing the process

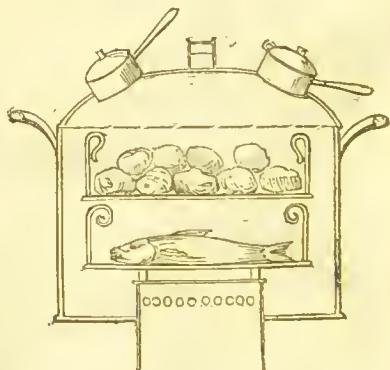


of cooking, steak-tongs, as represented in the engraving, are best adapted, as the size of the ordinary fork suffers the juice of the meat to escape.

STEAMING.—The application of steam to culinary purposes has much to recommend it, especially in large establishments, which may be so fitted up with the apparatus as to admit of the process being conducted on an extensive scale, with very little trouble to the cook. Steaming may be conducted on a small scale, with a common saucpan or boiler, fitted with a simple tin steamer. By means of a kettle fixed over it, the steam of the boiler in the kitchen-range may be made available for cooking in the manner shown in the engraving, which



exhibits fish, potatoes, and sances, all in progress of steaming at the same time. In the apparatus especially designed for the purpose, the meat is placed in a kettle with a valve to it, and without water. Steam is introduced; and, according to the pressure of the valve, will be the temperature at which it is steamed. If there is no valve, it will not rise above two hundred and twelve degrees; but with a very slight weight upon a common metal plug, it soon rises to two hundred and forty degrees, or even higher. There is much less waste in this way, both of heat and of the pieces of the meat; and, in point of economy, there-



fore, the plan is a very good one. The steam kettles may be placed at any moderate distance from the fire, and the pipes being

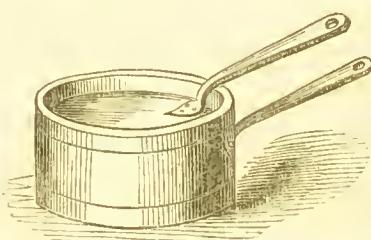
furnished with stopcocks, the steam is either admitted at the full or partially, and under pressure or not, a waste-pipe being also fitted. Vegetables steamed in this way, are particularly tender, but not of quite so good a colour as in boiling. When it is desirable to boil water by steam for the purposes of cooking, as for some of the vegetables, soups, &c., it is only necessary to fill any of the above steam kettles with water, and then turn on the steam as usual. The water is soon heated to the boiling point, and then acts exactly as if placed on an ordinary fire.

STEEL, PREVENTION OF RUSTING.—Dissolve half an ounce of camphor in a pound of hog's lard; take off the scum; mix as much black-lead as will give the mixture an iron colour. Iron and steel goods rubbed over with this mixture, and left with it on twenty-four hours, and then dried with a linen cloth, will keep clean for months. Valuable articles of cutlery should be wrapped in zinc-foil, or be kept in boxes lined with zinc. This is at once an easy and most efficient method.

STEREOSCOPE.—Books:—*Ingleby's Stereoscope and Binocular Vision*, 1s.; *Brewster's Stereoscope*, 5s. 6d.; *Lomé's Stereoscope*, 1s.; *Ackland's How to take Pictures*, 1s.; *Lane's Art*, 1s.; *Dictionary of Useful Knowledge*, article *Stereoscope*.

STEWING.—A wholesome, convenient, and economical mode of cookery. One of its great recommendations is the small amount of fuel consumed to sustain the gentle degree of ebullition required. The common cooking stoves employed in the country are not very well adapted for the exact regulation of heat which stewing demands. The stoves used in France are admirably suited for this purpose, as are also the hot plates or hearths with which the kitchens of well-appointed houses are also furnished; but when these conveniences do not exist, the stewpans must be placed on trivets high above the fire, and be constantly watched and moved, as occasion may require, nearer to, or further from the flame. Thick, well-tinned iron saucepans will answer for stewing, provided they have tightly-fitting lids to prevent the escape of the steam. The enamelled stewpans, which have lately superseded the old-fashioned metal ones, are peculiarly well suited for this culinary process. They should always be filled with water immediately after being emptied, and will then merely require to be well worked and rinsed with more boiling water. In order to produce a good stew, there should be prepared a sufficient quantity of sweet and rich stock. The different ingredients of which the stew is composed should also be well mixed. Meat, in stewing, is apt to stick to the bottom of the vessel. To prevent this, it is desirable to place across the stewpan some skewers, a little way from the bottom; or an inverted soup-plate may be used for the same purpose. If vegetables are old, they should be blanched or parboiled before they are added to stews, otherwise they will give to the meat and

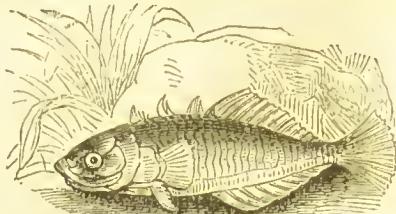
gravy too strong a flavour. Care should be taken that the various kinds of thickening should be added at the proper time, and in a proper manner. Whole grain or seed, such as pearl-barley or rice, should be put into stews when they are at boiling heat. When bread is used for thickening, a similar rule must be observed, and care should be taken not to break it; but let it boil whole till it becomes a pulp, and incorporates itself with the liquor. All thickenings of flour or meal should be stirred with a cold liquid till it is perfectly smooth; it should then be stirred into the general mass. In spicing stews, great judgment is required, so as not to displease the general taste. It is better to use whole spice than that which is pounded. If dried after using, it will serve for several stews. The fat which covers stews when they are cold should not be broken if they are intended to be kept. By thus excluding the external air from the stew, it will prevent the mass from fermentation and consequent decay. The quantity of water used in stews should be double the weight of the meat, that is, a quart of water to a pound of meat, which leaves a pint of liquid stew. Salt should be used in sufficient quantity to separate the blood from the meat, and to cause it to rise in the shape of scum, which carefully remove. When the scum is raised by brisk boiling, and got rid of, let the stew simmer very gently, till all the nourishing, flavouring, and colouring properties of the meat, &c., are thoroughly incorporated with the liquor. The ordinary stewpan, as seen in the engraving, is



usually made of copper, and the handles of the cover are placed as shown herein. Copper stewpans should be kept well tinned on the inside, to prevent the unpleasant flavour and the injury like to result from the impregnation of copper. In a dietetic point of view, stews are conceded to be more digestible and nutritious than meats otherwise cooked, inasmuch as the nutrient portions of the first are presented in a form most readily assimilated by the system, whilst, at the same time, not a particle of that nutrient is wasted. Book:—*Housewife's Reason Why*, 2s. 6d.

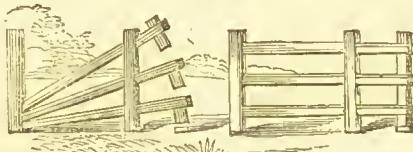
STICKLEBACK.—A dark-coloured little fish, found in ditches and ponds. They are best caught with a small hand-net, and are used as bait for perch. These fish may also be put into a vase, and kept easily for a considerable time. Where they exist in any

great numbers, they may be given as food to poultry, to which they prove very nutritive.



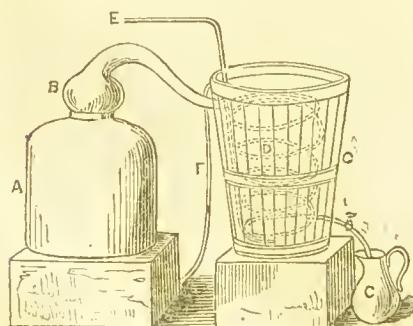
tious, and, it is said, render them peculiarly prolific by their stimulating qualities.

STILE.—A contrivance for persons to pass over or through fences, without the risk of admitting the larger quadrupeds. There are many forms of stiles: as by steps over a wall; by a zig-zag passage, formed by stakes, through a hedge or paling; a turning-bar or turnstile, &c. The stile of falling bars, as seen in the engraving, is



chiefly used in pleasure-ground, or between paddocks; it consists of bars light at one end and heavy at the other, with concealed joints or pivots, in an upright post placed nearer one end of the bars than the other. Thus, while the weight of the short ends of the bars keeps them in a fencible position, a slight pressure on the other end will form a passage which any one may easily step across.

STILL.—A vessel or apparatus employed for the distillation of liquids. The forms of stills and the materials of which they are made, vary according to the purposes for which they are intended, some being exceedingly simple, while others are equally elaborate and complicated. The engraving



represents the most common and useful apparatus of this kind; A, is the body of the

still; B, the still head or capital; C, the worm tub; D, the worm or refrigerator; E, the cold water pipe; F, the waste pipe; G, the receiver. After the fluid is put into the still, the head is placed on, and connected with the worm tub or refrigerator, and the joints are all securely luted. For ordinary liquids, a stiff paste made with linseed-meal and water, to which a little chalk may be added, answers well for this purpose. For corrosive liquids nothing is better than elastic bands or rings interposed between the joints, which are then "brought home" with screws or clamps. Heat is next applied, and the worm-tub is supplied with cold water in sufficient quantity to preserve its contents at a proper temperature; the application of the heat being so regulated that the liquid may drop from the end of the refrigerator, quite cold and unaccompanied with vapour.

STILTON CHEESE—Take fifteen gallons of milk, warm from the cow; put twelve pints of sweet cream in a small tub, and pour on it a kettleful of boiling water, stir it till it be well mixed, and then put it into the cheese-tub with the milk, when it is at ninety degrees, add the rennet; when it has coagulated, break the curd a little, put a thin cloth over it, and take the whey off through it; when as much has been taken off, as will come easily, put the curd into a bag or net, and let it hang till it gives over dripping, then cut the curd in pieces, and lay it in as much cold water as will cover it; let it lie an hour, and as the pieces are taken out, strew a little salt upon them, and put them into the vat, first breaking the top a little, to make it join with the next piece; then lay a small weight upon it, so as not to occasion the whey to come off white. It must be turned every three hours the first day, and three times a day, for three days, changing the cloth every time it is turned in the vat, and keeping it under a moderate pressure; it is then taken out of the vat, swathed tight till it begins to dry the bandage, which must be changed every twenty-four hours; it ought to be rubbed with a little salt before it is bandaged, and for a considerable time wiped and turned every day. The best season for making this cheese is from July to October.

STIMULANTS, ALCOHOLIC.—Although, in a general sense, water is undoubtedly the purest and most wholesome beverage that can be drunk, still there exist exceptional cases where an alcoholic stimulant becomes a medical agent, and is accordingly had recourse to. It must also be observed that in the administration of this agent the greatest care must be observed as to the quantity that is applied. The effect of a moderate quantity of diluted spirit, or of wine or malt liquor, is very different from that of poisonous irritant doses of alcohol. When a moderate quantity of diluted alcoholic fluid, such as wine or malt liquor, is swallowed by a person in health, there generally ensues a feeling of warmth in and around the stomach, which is gradually diffused over the whole body, and is accompanied with a slight increase of nervous

and muscular energy, the functions generally being more actively performed, and the mental power increased. Such may be called the salutary effects of a moderate quantity of the stimulant. If the bounds of moderation be passed, the stimulation is increased, the pulse quickened, the cheek flushed, and the mind excited in excess: if the quantity of stimulant is still further increased, a degree of torpor is induced, both mental and bodily; perception is blunted, there is a general languor, giddiness, and obscurity of vision, incoherence of ideas, and incapability of exercising volition. The amount of stimulation caused by alcoholic fluids varies, of course, according to the strength of the dose, but also in some degree according to the habits of the individual; for there is no question that those who habitually drink strong wines or spirits derive little, if any, stimulation from the weaker alcoholic drinks; moreover, some conditions of the system modify greatly the stimulant power of alcohol. In spasms, in fainting, in depressed states of the system, from fever or other such causes, persons often take, with scarcely perceptible effect, doses of wine or spirit, which at other times would put them in a state of intense intoxication. Although, however, habit enables individuals to consume alcoholic drinks in greater quantity, and of greater strength, it by no means follows that this is done with impunity: if excess be habitually indulged in, the mucous membrane of the stomach becomes diseased, as the effect of a continued low state of inflammation, and even the ether coats of the organ undergo changes of structure and indurations, which occasionally degenerate into cancer; at the same time the muscular and nervous systems, and the secreting organs generally, are apt to suffer seriously. In considering the effect of alcoholic stimuli on the system, due attention must always be given to the form in which they are taken. It is certain that ardent spirits will exert a much more irritating effect upon the nervous system, both locally in the stomach, and at large, than the fermented liquors. It is well ascertained, that a certain amount of wine exerts less intoxicating effect than the spirit in the same quantity of wine would do, were it separated by distillation, and then diluted with water; and moreover, that different wines, although containing the same absolute proportion of spirit, will be found to vary very considerably in their intoxicating powers. The broad assertion that alcoholic liquors do not form a necessary part of the sustenance of man is correct so far as *healthy* men are concerned. Equally certain is it that there are persons whose functions are so debilitated and depressed, that they require alcoholic stimulants to maintain their digestive and other powers. The requirement may be artificial, but not more so than any other medicine administered under the various phases of disease. There are also accidental circumstances in which every one may at times be placed, and in which the question arises, whether the assistance of alcoholic stimulation may be

had recourse to with benefit or not. Exhaustion by long exertion in extreme heat is one of these—the skin acting powerfully, discharges immense quantities of fluid, which must be compensated for. As long as the energies remain unimpaired, the compensation should be made by unstimulating drinks; by these the strength is every way better preserved; but when the energies flag, if exertion must still be made, a small quantity of diluted alcoholic stimulant may be taken with advantage. Under continued exposure to the effects of intense cold, especially if symptoms of torpidity supervene, the use of *undiluted* spirit may save human life. In such cases, however, the caution must not be forgotten, that the spirit should not be had recourse to early, and not, if possible, till it is used to stimulate to the last effort, to gain the place of safety. Other cases occur in which persons are compelled by circumstances to make continual exertions, involving loss of the usual rest; in these, after a time, the moderate use of the stimulant is highly beneficial. The necessity for the use of alcoholic stimuli, under the various external circumstances which tend to depress or exhaust the bodily powers, is, of course, greatly modified by the constitution, hereditary or acquired, of the individual. Some individuals there are who, from their birth upwards, are always at a low ebb, who have no power of endurance. Such persons generally require stimulants habitually, to enable them to keep up to life's duties at all; still more do they require such aids when exposed to continual depression or exhaustion.

STINGS, REMEDY FOR.—In this country the bee, wasp, spider, scorpion, and viper, are the only insects or reptiles that are at all likely to produce injury to the body. And these, though painful, seldom produce any serious harm, unless the sting has been inflicted on the throat, over the organ of voice, or in the mouth near the pharynx, or fancies. In these cases, the symptoms of suffocation that follow the sting, demand leeches to the throat, hot fomentations, cordials, and an opiate. But in all other parts of the body, whether the sting has been extracted or not, all that is needed is to wet the part freely with the extract of lead, and keep it covered with a rag wetted with the extract. It is customary to touch the affected part with hartshorn, and when nothing better can be procured, it may be used; but nothing is equal to the lead.

STOCK, CULTURE OF.—Of this favourite flower, the double species is the most highly esteemed for the beauty and deep tints of the flower, and for its delightful odour. Of the common or ten week stock, and the smooth-leaved there are not less than one hundred varieties, generally called German stocks. The single or Brompton stock is a biennial, of which there are also several varieties. The ten week stock in order that it may flower the same year, should be raised in a hot-bed, and transplanted as early in the spring as the state of the weather will permit. The Brompton, on

the other hand, should not be encouraged to flower till the second season, and on this account may be sown in the open air in



April or May, and transplanted in July to the situation where it is destined to remain. It is of importance that all the species of this genus should be transplanted when they are very young, because, having fusi-form roots, and fine side fibres, they seldom recover from the check which they receive from being transplanted, after they are two or three months old. The chance of double plants is often very precarious. It is said that those seed plants which have more than the usual number of petals, that is, six or seven, instead of four, generally produce double flowers when the seed is again sown. It would be well, therefore, for the florist to mark such plants and preserve the seed to be sown separately.

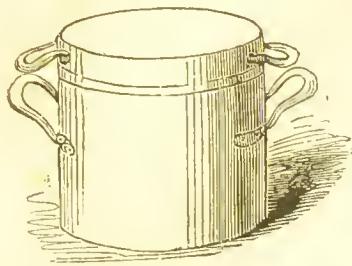
STOCK EXCHANGE TERMS. — The technical terms made use of in the Stock Exchange are almost peculiar to its members; that peculiarity often shows itself in the abbreviation of words. Amongst the terms frequently made use of are the following:—*Consols* is an abbreviation of the term consolidated annuities, the prices of which rule, in a great measure, those of most other public securities. The annual interest is three per cent. *Omnium* is a term which signifies the whole of the stocks, of which a government loan consists, when two or more descriptions are given for £100 in money; and which may be made up of consols, reduced annuities, and long annuities, or of other descriptions of stocks. *Scrip* is an abbreviation of the term subscription, and is applied to each of the stocks given in exchange for a loan, as consol scrip, reduced scrip, &c., and may be sold separately as such, until all the instalments of a loan are paid up, when the term is no longer applied to them. The members of the Stock Exchange are called jobbers and brokers. The jobber is the dealer, who makes the price at the market value. The broker is the one who buys or sells to the jobber, for his principal, and takes his commission for transacting the business. A *bull* is one who buys to sell again at a higher price. A *bear* is one who sells to buy back at a lower price. Hence the constant use made of the phrases *bull* and *bear* transactions; or in other words,

speculations for the *rise* and *fall*. A *stag* is one who is not a member of the Stock Exchange, but deals outside, and is sometimes called an *outsider*. These gentlemen not unfrequently write in a fictitious name for shares, and sell the letters of allotments. *Contango* is the sum paid per share, or percent, for carrying over such shares for a longer period than they were originally bought for, which is from one account to another. *Backwardization* is when a party who has sold shares or stock, without having them in his possession to deliver, pays so much per share, or per cent, for not being compelled to do so until the following account: the price of the shares or stock in either case being fixed at the market value at that time. *Options* are dealt in with almost every description of stock and shares, but more generally in consols, and may be either a *put* AND *call*, or a *put* OR *call*. A *put* and *call* is when a person gives so much per cent, for the option of buying or selling so much stock, on a certain fixed day, at a price fixed the day the option money is given. A *put* is when a person gives so much for the option of selling so much stock, at a certain time, the price and date being fixed at the time the option money is given. A *call* is when a person gives so much for the option of buying stock, at a certain time, the price and date being fixed at the time the option money is given.

STOCK GRAVY.—A culinary preparation which forms the basis of all sorts of soup and sauce, whether brown or white. What is termed “fresh stock,” is made as follows:—Wash a leg or shin of beef very clean; crack the bone in two or three places, and extract the marrow; add meat trimmings, and heads, necks, gizzards, feet, &c., of game and poultry; cover them with cold water; watch and stir up well, and the moment simmering commences skim it very clear of all scum. Then add some cold water, which will make the remaining scum rise, and skim it again. No fat should enter into this composition, and the stock should be perfectly clear and limpid. When the surface of the broth is thoroughly clear, put in carrots, turnips, celery, and onions, according to the quantity. After the vegetables are added, cover it close, and set it by the side of the fire, and let it simmer very gently, for four or five hours, or more, according to the weight of the meat. Strain it through a sieve into a clean, dry, stone pan, and put it on a cold place for use. Second stock may be made from the meat left after straining the first stock off, by covering it with water, and by letting it continue boiling for four or five hours. This stock will produce good glaze or portable soup.—See BROWNING, CONSOMME, GLAZE, STOCK, &c.

STOCK POT.—No house, however small it may be, should be without a stock-pot. It is the save-all of the establishment, and there is nothing in the shape of meat that is sweet and wholesome that it may not receive. Bones, trimmings of cold meat, should go into the stock-pot; egg-shells may

also be put in, as they tend to clear the stock. Hard crusts of dry bread may also



be put in; they gather the scum, which should be taken off three or four times a day. Ham, beef, veal, mutton, lamb, pork, bits of poultry, game, in fact the bones or remains of any kinds of meat, should go into the stock-pot. Cold carrots and parsnips, or the remains of onion-sauce or gravy, the outside stems of celery, thoroughly cleaned and cut up, should go into the stock-pot. The pot itself should be made according to the engraving. The tap should not be quite at the bottom, which allows room for the sediment, and the stock may thus be drawn off perfectly clear.

STOCKINGS, TO WASH.—*To wash silk stockings*, cut in thin bits some white soap, and boil it in soft water; pour a little of it into cold soft water, and wash the stockings first upon the inner side; repeat the washing with fresh suds and water, till they are washed quite clean; turn the outside the last time of washing, and if the foot part be very dirty, rub a little of the boiled soap upon them, but not upon the legs. If the stockings are to be coloured, mix the dye with a little clean suds, and dip in the white stockings; draw them out smooth, and lay them upon a sheet on a bed, with the window open, and when almost dry, lay them upon a piece of flannel, and with another bit rolled up, rub them hard and quickly one way till they are dry. *To wash thread stockings*, first soap them well, and then put them into a lather of cold water, and boil them; afterwards put them into a fresh cold lather and boil them again; when, on taking them out, they will require little more than rinsing. *To wash cotton stockings*, lay them in cold water at night; next day boil them in a copper with some soda and soap; stir them well about, and they will become quite clean without any rubbing; rinse them well in cold water, and bleach them: when nearly dry, draw them smooth, folding them straight over the instep. Place them under a heavy weight, or iron them.

STOMACH, DISORDERS OF.—Those functional disorders of the stomach, which originate within the organ itself, and are independent of the general system, are either acute or chronic, and, in very many cases, the only medicine required to effect a cure in

either condition is a well-arranged system of diet, and a properly administered food, which is both aliment and medicine, and while being the most agreeable, is by far the most permanent means of cure. In all *acute* affections of the stomach, the diet should be free from all substances that can irritate the coats of the organ; consequently, a farinaceous regimen is to be adopted, consisting of gruel or arrow-root, sago, tapioca or semolina puddings, with a rigid exclusion of everything solid, whether animal or vegetable. In *chronic* cases, though the restriction is by no means so imperative, care should always be taken never to allow any hard or irritating substance to pass into the stomach; and though both animal and vegetable substances may be employed in this form of disease, everything should be so completely masticated, and thoroughly softeued with saliva, as to be, as nearly as possible, when it reaches the stomach, of the same bland and unoffending nature as the farinaceous food in the former case. All condiments and heating spiccs must be rigidly excluded, the stomach never allowed to remain longer than four hours without food, and liquids never taken without a certain proportion of solid food, and that thoroughly masticated. Another necessary point to be attended to, is to regulate the diet according to the age of the patient; this is especially necessary with regard to children and persons advanced in life. An aperient, such as the compound rhubarb pill, may be sometimes necessary; but, generally, functional affections of the stomach may be treated safely by the patient himself, if he will only reduce his dietary to a system, observe what has been said above, and study to adapt his food to his feelings and the actual condition of his stomach.—See DYSPEPSIA.

STOMACHICS.—Under this head are comprehended certain remedies employed when the stomach is wanting in tone and vigour. The following may be taken with advantage. Take twenty grains of powdered rhubarb, and dissolve it in three ounces and a half of peppermint-water, then add salvolatile and compound tincture of gentian, each a drachm and a half. *Dose*, from one ounce to an ounce and a half; or, heat apricot kernels to a paste, and put it into spirits of wine, in the proportion of an ounce of kernels to half a pint of spirit. Infuse for a fortnight, then filter, or pour off carefully. Persons of weak digestion may take a teaspoonful of this twice or thrice a day in water. In some cases of nervous indigestion, this is a most valuable remedy. The dose may be extended to a tablespoonful by degrees.

STONE CREAM.—Put three tablespoonsfuls of lemon-juice, and the grated peel of one, some preserved apricots or any other sweetmeats, into a glass or china dish. Boil a quarter of an ounce of isinglass in a little water, till dissolved, add it to a pint of cream, sweetened well with pounded loaf sugar; boil it and stir it all the time; pour it into a jug, stir it now and then till milk-

warm, then pour it over the sweetmeat round and round. It may be made the day before being served.

Lemon-juice, 3 tablespoonfuls; lemon-peel, 1; apricot or sweetmeat, sufficient; isinglass, $\frac{1}{4}$ oz.; cream, 1 pint; sugar, to sweeten.

STONE STAIRS AND HALLS, TO WASH.—These should not be often washed, but dry rubbed with a blue or gray stone, then wiped with a coarse flannel, and swept; thus all greasy spots will be removed. A common brick may be used instead of the stone.

STOPPERS OF BOTTLES, TO LOOSEN.—If the stopper is firmly fixed by means of the salts contained within the bottles, do not attempt to strike the stopper, but add as much citric acid to water as it will take up, thus making what chemists term a saturated solution; or else, pour some vinegar into a tumbler, and immerse the bottle in the solution, or vinegar. In the former case, a citrate of ammonia will be found, and in the latter case, an acetate of ammonia. After the bottle has remained in the tumbler a short time, remove it to a basin of warm water, and it will soon be released.

STORAX.—A tree indigenous to Italy and the Levant. It produces a fragrant resin which readily melts with heat. There is also another kind which exists in masses, very light and bearing no resemblance to



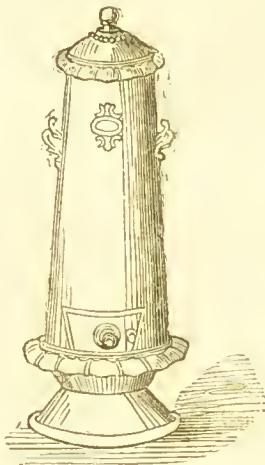
the former, as it seems almost wholly composed of dirty saw-dust, merely coked together with resinous matter, and though much less esteemed than the purer kinds of storax, yet when freed from the woody part, it is said to possess more fragrance, and is superior to the other. It is readily dissolved in rectified spirits; it imparts to water in which it has been infused a deep yellow colour, a slight odour, and balsamic taste; by distillation it gives out more of its fragrance, but does not yield an essential oil. The pure resin distilled without addition yields a portion of benzoic acid, similar to the flowers of benzoin.

STOVE.—The construction of a stove is of great consequence to the warmth and comfort of rooms. They are of every shape, and size, and pattern, and must depend greatly upon the taste and purse of the purchaser; but it is advisable to regard the good qualities of a stove rather than its form and finish. Some stoves give very much more heat than others, and these are not always such as to attract the eye; but this point should be most considered. It is generally admitted that stoves give more heat when seated low than they do when placed high in the chimney. Bright steel stoves are very effective, and are often preferred; but in small establishments they are not desirable, because they give so much additional work to the housemaid. The common iron grates, when neatly and handsomely constructed, and properly cleaned, are sufficiently good for persons of moderate means and simple tastes. It is a very good plan to have the whole of the iron-work painted black; it looks better when cleaned, and there is less trouble in polishing it. If the back and sides of fire-places are made of stone or brick, much more heat is given out than when they are constructed of iron, which absorbs more heat than it throws into the room; while stone and fire-brick, on the contrary, throw out more than they absorb. To give the greatest amount of heat, the sides of the fire-place should not be at right angles to the front, because the heat would not then be thrown so forward as it would be if the sides were covered, or in other words, the corners cut off. Fire-bricks, when used as cheeks, are apt to break from excessive heat, and require removal; but they will last a long time, and the trouble and expense of replacing them is trifling. The advantage of hobs is by no means to be overlooked, by those whose domestic arrangements necessitate the keeping of food and fluids warm. The present fashionable stove, which consists only of an iron bottom or front attached to sides of brick or stone, may be rendered more convenient by having small, round, flat slabs of iron, fixed in the corners on the outside, between the upper bar and the side. If the slabs are perforated like open work, and neatly finished, they are very ornamental also, even in a drawing-room. The size of a stove must be judiciously adapted to the size of the room. A large stove in a small room, or a small grate in a large room, are equally incongruous, and fuel is wasted in both cases either by overheating or underheating the apartment. Small stoves are best for bed-rooms, which should never be overheated; nothing being more unwholesome or prejudicial to rest, than too great an amount of heat in a sleeping-room. Small stoves for small bed-rooms are simply and cheaply made by covering the sides of the chimney, and fixing bars in the brickwork to form the front and bottom of the grate. If a flue runs up the side of a room which contains no fire-place, this simple contrivance may easily be adopted at a cost of a few shillings; as ventilation is essential in sleeping-rooms, it may thus be secured very cheaply. The width of the fire-

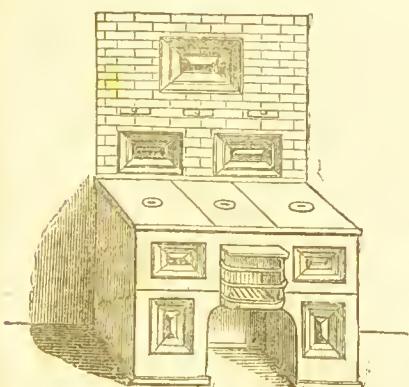
place may be proportioned to the size of the room. The registered stove as at present constructed, consists of a framework of iron fitting into the space left in the brick-work, and containing an open basket of iron bars in which the fire is made. It is usual to make this framework into two portions, one being a square, fitting into the mantel-piece, the other projecting back from this on each side as well as at the top, at an angle of forty-five degrees, and containing within it the grate itself. This last may either consist simply of bars which lie at the bottom and front, or it may also be backed with a fire-brick tile. At the top, the bevelled boundary is pierced by an ohlong square aperture, to allow the escape of the smoke, and set on this is a trap-door, which may be lowered entirely when a fire is not wanted, as in the summer months, by which precaution the fall of soot is guarded against. The sham register is a very cheap and economical stove, both in the original cost and in the saving of heat; it consists merely of a front and bottom of iron bars, which are set in the brick-work bevelled in the form of a register stove; the place for the fire is formed by building up the sides and back with fire-brick. The bottom grate is from five to seven inches deep from front to back, according as the front bars are straight or curved; and the brick-work at the back slopes upwards for about twelve inches from the bottom grate, and is thence carried up with the covings as high as the centre of the arch over the chimney opening. The objection to this form of stove is its want of neatness and artistic form, and the disposition which the bars have to become loose, from the constant expansion and contraction to which they are subject. For warming cottages, the kind of stove seen in the engraving is admirably adapted. It is fitted with two ovens, or an oven and hot closet. It comprises an open fire-place in the centre, a

the emission of warm air, an oven, hot-closet, damper, and sweep-door, and a boiler. In the flange of the oven and closet are side doors, for the purpose of admitting a brush when sweeping is required. The oven has a flue all round it, and is equally heated. When cooking is over, a fire made up of small coal, cinders, and ashes, well saturated with water, will last for several hours. The room is heated to an agreeable extent by a continual supply of pure warm air drawn in from without through a drain or pipe to the hot air chambers at the back and sides of the fire-place, and emitted through the aperture at the top of the stove.

Closed Stoves are intended to afford heat by warming the air in contact with them; but without any direct radiation of heat from the fuel itself. The radiant heat of the fire within the stove is absorbed by the material



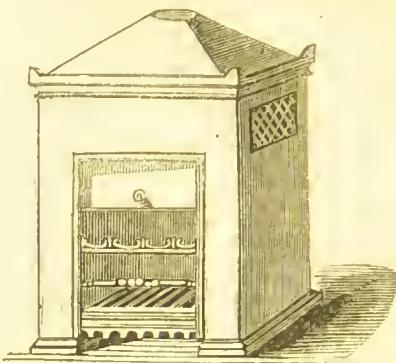
of which the stove is made, and generates warm air. This warmed air rises upwards towards the ceiling, and is succeeded by fresh air to be warmed in its turn, and so on, until the whole of the air in the apartment has received an increase of temperature. The common German or Dutch stove, used in this country, is as economical and effective as any stove whatever, for warming an apartment. It consists merely of a cylinder of sheet iron, furnished with a grate in the interior for the fuel, a door for the fire, and another for the ashes, with a pipe to carry off the smoke into the chimney flue, which pipe may be lengthened when much heat is required. Here no air passes up through the chimney, except that which has come through the fire, and has served for the purpose of combustion, being rendered unfit for respiration; and the whole of this is carried off. All the rest of the heat, over and above what thus passes off with the smoke, is communicated to the iron, and by that to the air of the room in contact with it, at the same time that a great deal of heat in a radiated form is given out by the iron itself, when much heated. As this stove may be



draw-shelf at the bottom of the grate, a drop-shelf at the top, which, when raised, forms a blower, a hot plate forming an ironing-stove, an opening at the top for

placed at a distance from the wall by lengthening the pipe, it is very effectual in producing a great deal of heat, while it occasions neither disagreeable draughts, smoke, nor dust. But the inconveniences are, that there being no regulator for the draught of air, the iron is apt to become red hot, and then it is extremely dangerous if placed near anything combustible; and as the fire is not seen except when the door is opened, it is very difficult to regulate it. Another circumstance which renders its use inconvenient is, that the iron, being generally much heated, a disagreeable effect is produced upon the air of the apartment. Many stoves of this kind, of cast-iron, and of elegant and convenient forms, are to be met with in halls and staircases, where it is considered the bad effect upon the air is less noticed, fresh air being more frequently introduced by the opening of doors. Although closed stoves afford the most economical means with respect to fuel, as well as the most effectual way of warming the interior of dwellings, yet they are liable to the serious objection that with them it is difficult to change the air in apartments, or, in other words, to procure that ventilation so essential to health. When the door of the fire is in another room, and the windows and doors of the apartment made tight, there can be very little change of air in the room, and, consequently, the inhabitants must live in an atmosphere vivified by a mixture of the portion that has been exhaled. With a close stove, therefore, whatever may be the construction of it, there is usually an accumulation in the apartment, more or less, according to circumstances, of gases and effluvia unwholesome to breathe. It is true that the foul air may be generally made to escape by keeping the upper sash of the window open an inch or two. But this will not act except the ingress of as much cold air can be provided for somewhere at the lower part of the room. If this be not done, the air will come in at the top sash to supply the stove, instead of going out. The chief difficulty here is to restrain the ingress of cold air, so that it may not occasion inconvenience. This is best effected by numerous small apertures in places where they will be least inconvenient, and by preventing the stream of air from coming in directly, but turning it aside by some methods, which must vary according to circumstances. It should be known that all stoves which profess to heat apartments without a flue, must be in the highest degree pernicious, and even dangerous, since it is quite impossible that combustion can go on without generating noxious gases. A stove of any kind, therefore, in an apartment without a flue, cannot fail to be injurious to health, and sometimes suddenly fatal. Iron stoves are frequently made with flues to descend below the level of the floor, for the purpose of getting rid of the smoke without the inconvenience of a pipe crossing the apartment. They are extremely useful in warming shops and other places where there is a considerable circulation of air, and where the effects of heated air are not perceived so much as in

confined places. The air stove, seen in the engraving, is also much used for this pur-



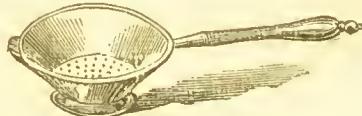
pose; but, in this case, the fire-place is lined with brick or fire-stone, which prevents the air being overheated, and the warmed air comes out through the gratings at the sides. A sliding plate at the upper part of the opening acts as an occasional blower. The American stove, for burning wood only, is an excellent contrivance, particularly for airing rooms, which it does effectually in two hours. It is made of sheet iron, and stands upon four tall, light legs, which render it perfectly safe when placed upon a floor or carpet, without there being any necessity for putting an iron plate beneath the feet. Before the door of the stove a sheet of iron is fixed, very much in shape like a dust-pan with raised sides, to prevent any litter falling on the floor. A short piece of pipe is affixed to the back, to which pipes of any required length can be added, with the elbow resting on the top bar of a fire-place; but the length of pipe containing the regulator must always be next the stove. The whole apparatus is so light that it can be carried about like a basket. The size which will be found to draw the best measures fourteen and a half inches in depth, the same in breadth, and the same in the length of the leg, while the length of the body is twenty inches. As this stove will only burn wood, it is useful only in particular situations; but where wood can be obtained at a cheap rate, it will be found extremely convenient. Gas stoves are becoming very generally introduced as a means of heating halls, shops, &c. The gas is simply burnt in an iron chamber, the results being either suffered to escape into the apartment, or else carried off in the ordinary way by a flue.—See ARNOTT'S STOVE, GRATE, KITCHEN RANGE, &c.

STOVE-HOUSE.—This is a glazed structure, differing from a green-house chiefly in requiring a higher temperature to be sustained within it, either for forcing fruits or for growing plants from tropical climates. The management of stove plants depends a great deal on the kind of house in which they are grown; but there is little difficulty in growing them well, if the house can be

kept up to a proper heat, and a sufficient quantity of air given when required. In the construction of stove-houses, close glazing is to be preferred; either the lights should be leaded or the laps stopped with putty, so that a sufficient quantity of air may be always given, and the house kept to a more regular heat. When the laps of the glass are left open, a great deal of air is admitted, which is often injurious, particularly on cold windy nights. The thermometer should never be allowed to be below sixty degrees of Fahrenheit; if it reach above seventy on a fine day, a little air may be given, which should be taken away early, and the house shut up warm; it then requires less fire to keep up the heat through the night. If the house is heated in the common way by flues, and the plants are plunged in tan, care must be taken not to give them too much bottom heat, as it will injure their roots; nor too much water in winter, as it is apt to rot them. Particular caution is necessary for watering in winter not to wet the tan, as it makes the worms very troublesome; they often destroy young plants by throwing the mould out of the pots. Some hot dung or tan may be still kept in the pot to throw up a little warmth, on which should be put a considerable thickness of sand or gravel for the pots to stand on, and the plants will thrive much better than when plunged in tan. If the houses are heated by steam, no tan is required. The plants may be set on stages, or in any way that is most convenient. Some of them may be planted out in the house, where they will grow in greater perfection, and flower and ripen fruit better than when confined in pots. Flues are best built of briars set on their edges, and the top formed of a shallow iron trough for the purpose of holding water, and thus keeping the air moist as required. At night, for retaining the heat, pantiles may be placed along within the trough. Hot water in a tank is superior to the same source of heat in pipes, because it is not liable to freeze; and it is preferable to steam, because its heating power continues until the whole mass of water is cooled down to the temperature of the house, whereas, steam ceases to be generated as a source of heat, the moment the temperature falls below two hundred and twelve degrees. If steam be employed, the following are the rules for calculating the surface of pipe, the size of the boiler, the quantity of fuel, and the amount of ventilation for a house thirty feet long, and twelve feet wide, with the glass roof eight feet, length of the rafters fourteen feet, and height of the back wall fifteen feet. The surface of glass in this house will be seven hundred and twenty feet, superficial, namely, five hundred and forty feet in the front and roof, and one hundred and eighty feet in the ends. Now, half the vertical height, seven feet six inches, multiplied by the length in feet, and added to one-and-a-half lines, the area of glass, is equal to the cubic feet of air to be warmed in each minute when there are no double doors. That is, $7\frac{1}{2} \times 30 + 1\frac{1}{2} \times 720 = 1305$

cubic feet. But in a house with wooden bars and rafters, about one-tenth of this space will be occupied with wood work, which is so slow a conductor of heat that it will not suffer a sensible quantity to escape, therefore 130 feet may be deducted, being the quantity to be warmed per minute = 1175 cubic feet. To ascertain the surface of pipe required to warm any given quantity of air, multiply the cubic feet of air to be heated per minute, by the difference between the temperature, and at which the house is to be kept, and that of the external air, in degrees of Fahrenheit's thermometer, and divide the product by 21, the difference between 200, which is the temperature of the steam pipes and the temperature of the house; the quotient will be the surface of east-iron pipe required. In the house, the dimensions of which are above given, if the lowest temperature in the night be fixed at fifty degrees, and ten degrees are allowed for winds, and the external air is supposed to be at zero or 0 of Fahrenheit, then 1175 multiplied by 60°, and the product divided by 21, the difference between 200 and 60, will give the quotient 236 = to the surface of pipe required. The house being thirty feet long, five pipes of that length and five inches in diameter will be about the proper quantity. If hot water be employed instead of steam, the following proportions may be adopted. In a span-roof propagating house, forty feet long, thirteen feet broad, seven feet high in the centre, and four feet high at the two fronts, being a superficial surface of glass amounting to 538 square feet, there should be a tank eighty-three feet long, running round three sides of the house, four feet wide and about eight inches deep, and consequently capable of containing nearly three hundred cubic feet of hot water. The mean temperature of a hot-water tank will never be much above a hundred degrees.

STRAINER.—An indispensable utensil in culinary operations, employed in sepa-



rating the sediment or deposit of liquids, as the grits of gruel, the shreds of gravy, &c.

STRAMONONIUM. — This plant is a native of America, and is a common annual in this country, growing in waste places and among refuse. It has strong narcotic qualities, and if taken in the stomach, produces all the effects of poison. The smoke of the dried root and stem has been much used for the cure of asthma. For this purpose, the root and lower parts of the stem are to be dried quickly, and cut into pieces, and then beat so as to divide the fibres. Part of them are put into the bowl of a tobacco pipe, and the smoke is first taken into the mouth, and then inhaled into the lungs. This excites a heat in the chest,

followed by copious expectoration. It frequently gives relief when a pipe is thus



smoked, upon a paroxysm being threatened, or even after its commencement. The patient generally falls asleep, and awakes relieved. In some cases a perfect cure is effected, but more commonly, according to the predisposing cause, the relief is only temporary.

STRANGULATION.—Whatever prevents the entrance of air into the lungs, by causing a constriction of the throat, produces strangulation, as in the case of hanging. The general appearances caused by hanging, or a cord drawn tightly round the throat, are, a swollen and blackened face, protruding eyes, the tongue between the teeth, pallid lips, and a livid mark or line round the throat. *Treatment.*—The first step is to remove the cord, and bleed immediately from the jugular vein, to the extent of ten or twelve ounces of blood. Artificial respiration is next to be established, by inserting the pipe of a pair of bellows up one nostril, and while an assistant closes the mouth and other nostril with his hand, inflate the lungs, expelling the air again immediately by removing the hand from the mouth, and pressing on the pit of the stomach; and in this manner inflating and expelling the air in gradual succession, till natural respiration is restored, or all hope of effecting it is passed. If electricity can be obtained, directly after bleeding isolate the body, and pass a few shocks through the chest and down the spinal column.—See DROWNING.

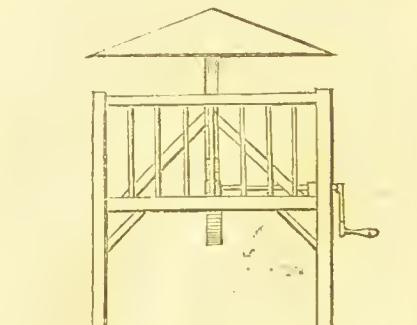
STRAW, USES OF.—The purposes for which straw is employed vary according to the nature of the straw. *Wheat straw* is used for stuffing horse-collars, and it is also useful in thatching houses or stacks. It forms an admirable bottoming to the littering of every court and lay-stall of the steading. As litter, wheat straw possesses superior qualities. It is not so suited for fodder, its hardness and length being unfavourable to mastication. *Wheat straw* is also used for stuffing mattresses and other articles of furniture. *Barley straw* can only be used as litter, and in this respect is very much inferior to wheat straw, either as regards cleanliness, durability, or comfort.

Oat straw is commonly used as fodder, being considered too valuable to be applied to litter. It makes a sweet soft fodder, and, when newly thrashed, has a refreshing odour. It is very clean, raising little or no dust. Sheep are very fond of oat straw, and will prefer it to indifferent hay. Of the different sorts of oat straw, that of the common oat is preferred, being softer, sweeter, and more like hay than that of the potato-oat. When oats are cut slightly green, the straw is much improved as fodder. *Rye straw* is not fit for fodder, but it forms a beautiful thatch. It is also in great request by brick-makers. *Pea and bean straw* it is sometimes difficult to preserve, but when kept in proper condition, no kind of straw is so great a favourite as fodder with all kinds of cattle.

STRAW BONNETS, TO BLEACH.—Wash them in pure water, scrubbing them with a brush; then put them into a box in which has been set a saucer of burning sulphur. Cover them up, so that the fumes may bleach them.

STRAW BONNETS, TO CLEAN.—They may be washed with soap and water, rinsed in clear water, and dried in the air. Then wash them over with white of egg well beaten. Remove the wire before washing. Old straw bonnets may be picked to pieces, and put together for children, the head part being cut out.

STRAW-RACK.—These contrivances for courts, farm-yards, &c., are made of various forms. On farms of light soils, where straw is usually scarce, a rack of the form seen in the engraving will be found serviceable in preserving the straw from rain, having a spoured bottom inclined upwards to keep the straw always forward to the



front of the rack in the reach of the cattle. The shank supporting the moveable cover, which protects the straw from rain, passes through the apex of the bottom. The shank with its cover is moved up and down, when a supply of straw is given, by the action of a rack and pinion, worked by the handle. The rack is made of wood, five feet square, and five feet in height to the top of the corner posts, and spoured all round the sides as well as the bottom, to keep in the straw. A more common kind of rack is a

wooden one of square form, sparred round the sides and bottom, to keep in the straw. The cattle draw the straw through the spars as long as its top is too high for them to reach over it, but afterwards they get at the straw over the top. Another kind of rack is one made of malleable iron, to supply the straw always over its top; it is rodded in the sides, to keep in the straw. It remains constantly on the ground, and is not drawn up, as with other racks.

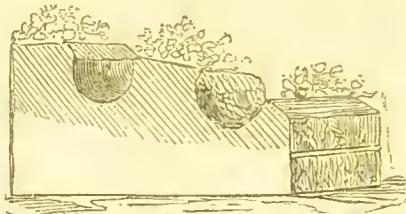
STRAWBERRY CREAM.—Take about a quart of strawberries, picked, washed and drained; mash them in a marble mortar; boil a quart of cream with a quart of milk, sweeten it to taste, let it reduce one half, and when cool mix the strawberries with it; add also about the size of a coffee-grain of rennet; when the milk is lukewarm pass it through a tamis, and put it into a pan which will stand the fire; put this on warm cinders on the top; when it has set put the dish in a cool place, or on ice, till you serve.

STRAWBERRY, CULTURE OF.—This well-known berry has received the name of *fragaria* from its delightful flavour. No vegetable production of the colder latitudes, or which can be ripened in those latitudes without the assistance of artificial heat, is at all times comparable with the strawberry in point of flavour; and if the soil and situation be properly adapted to it the colder the climate, and the more bleak, and elevated the situation, the more delicious is the berry. The best kinds of strawberries for cultivation are the Black Prince; Keen's seedling; British Queen; Elton; old pine; Alpine; Ritely's Goliath; Eliza; Eleanor. For hardy heavy crops none can exceed the Keen's; for size, the British Queen and Goliath; for earliness, the Black Prince probably takes the lead; for very late purposes, the Elton and Alpines; and for forcing, the Keen's and the British Queen. Strawberries are propagated by seed when the raising of new varieties is desired, and for heightening the culture of the Alpine class; but the more general mode of propagation is by young plants formed on the runners at almost every joint, or sometimes, but rarely, from suckers taken from the sides of the established plants. In the *cultivation by seed*, the seed should be taken from the finest specimens of the fruit, when it has attained its fullest degree of ripeness. The pulp should be bruised down with the hand into a vessel containing water, and as the pulpy matter is reduced the seeds will separate from it; and thus, by repeated washing, the seed falling to the bottom, they may be collected, dried, and preserved in paper bags till spring. About the middle of March a slight hot-bed should be prepared of leaves in a state of moderate fermentation, over which a bed of rich soil should be laid to the depth of nine inches, rendered as level and smooth as possible, upon which the seeds are to be thinly sown, and covered with very firm fine mould to the depth of an eighth of an inch; the frames of glass-lights should then be placed over the whole; very slight watering should be administered until vegetation commences, and the water applied in a tepid

state. When the young plants appear above ground, ventilation must be attended to; and if they come up too thick, they should be immediately thinned, for it is of great importance to obtain stout stocky plants, which never can be the case with any seedlings, if crowded too thickly at first. From the end of June till the middle of August the plants will be in a proper state for transplanting, and the situation best adapted for them is a northern border with a rich and moist soil. They should be planted in rows two feet asunder, and a foot distant in the line. The Alpines come into bearing at a much earlier age than most others, nor is it found that they continue to be productive so long; and hence this rearing from seed is exceedingly well adapted to them, besides continuing the season of the fruit to a much later period. The wood strawberries are in character very similar to the Alpines, and, like them, are best reared from seed, only the process of sowing should take place as soon as the fruit is ripe, choosing a bed of rich soil; and when the plants are so large as to be fit to be handled, they should be transplanted into another bed, to gain strength and stand over the winter. The March following, they should be transferred to the ground where they are to come to maturity, and be set in rows two feet apart and fifteen inches asunder in the line—thus, having three rows in a bed, with a three-foot alley between, to admit of the crop being gathered without treading on the fruit. The soil should be trenched two and a half feet deep, placing manure near the bottom of the trenches, for their roots will descend to that depth, and derive nourishment from it. In propagating by runners, the young plants which spring from the joints of the runners should be carefully preserved from the time they make their appearance, until they become rooted and fit for removal from the parent plant. On securing well-rooted plants as early in the season as possible depends much of the success of the cultivation of the fruit. As soon as the young plants are sufficiently rooted, they are cut off from the parent plant, and the roots carefully extracted by loosening the soil with a fork. They are then transferred to nursery-beds, prepared by deep digging, and four feet broad, the plants being set at distances apart according to the size of the foliage—thus, the Black Prince, which is the smallest in foliage of modern varieties, is set six inches apart, plant from plant, while the British Queen and similar strong-growing kinds are allowed nine inches. These remain in such beds till the month of October, when the ground is prepared for them in which they are to remain till they perfect their fruit. This ground is prepared by trenching from two and a half to three feet in depth, placing undecayed manure in the bottom of the trench, which bottom is previously torn up by a pick; manure is again applied when the trench is about half-full, and again when within nine inches of the surface. The plants of the large growing sorts are carefully taken up with a trowel, retaining as much of the soil as possible about the roots, and are

planted in lines two feet apart, and eighteen inches in the line, leaving a three feet alley between each three rows. By this process abundant crops will be secured the following season. After the beds are planted they should be kept as clear of weeds as possible, and no crop should be planted between the rows. As the runners grow, they are cut when necessary, that is usually about three times in the season. In the autumn the rows should be dug between, as this refreshes the plants materially; and when it is convenient, straw should be scattered in the spring very lightly between the rows; it serves to keep the ground moist, enriches the strawberry, and forms a clean bed for the trusses of fruit to lie upon, and thus, by a little extra trouble and cost, a more abundant crop is obtained. A short time before the fruit ripens, the runners should be cut off, to strengthen the root; and after the fruit is gathered, all fresh runners that have been made should be taken off with a reaping-hook, together with the outside leaves around the main plant; after which, the beds should be raked, then turned, and raked again. In the autumn, unless the plants appear very strong, some dung should be dug in between the rows, but if they are very luxuriant, this is not required; for in some rich soils it would cause the plants to turn nearly all to leaf. The duration of the bed must be determined by the produce of the plants, which varies much according to the different sorts; it also varies with the same sort in different soils, so that the precise time of the renewal of the bed must be regulated by the observation of the cultivator in each particular case. As regards the soil and situation for strawberries, they should be placed in a compartment of the garden by themselves, and it should be one which is freely exposed to the sun and air. A good loam of some depth is best adapted to high culture; therefore, loose and sandy soils must be mixed with marls or clays, and clayey soils must be rendered open, by applying sand, road-scrapings, cinder ashes, burnt or charred material, &c. Boggy or peaty soils will require consolidation by burning, or the application of sound soil, and by thorough draining, if wet. In old garden soils, the strawberry is seldom found to do well; indeed, in some it refuses to grow, while, in land newly broken up into cultivation, of sufficient depth and staple, and moderately enriched, they as invariably do well. As such conditions, however, cannot often be provided, recourse must be had to deep trenching, or burying the old soil, and bringing towards the surface that which has either not produced strawberry crops at all, or has been for some years lying undisturbed. In light sandy soils, strawberries are short-lived, and produce small fruit. In strong clays some varieties refuse to grow. Depth of soil is an essential point, for their roots will descend to the depth of two-and-a-half or three feet; manure, therefore, should be deeply buried, so as to be placed within reach of the spongiotels. Where the inclination is considerably towards the south,

the fruit will be earlier produced; and not only are such situations frequently chosen, but artificial banks have been thrown up, presenting an angle of even more than forty-five degrees towards the meridian. Strawberry walls or banks, made up with brickwork or masonry, to form reservoirs for water, as well as alleys between the beds, sloping banks covered with stones, placed between the plants, and various other contrivances have been recommended, and are, doubtless, very serviceable in heightening the flavour of the fruit. A strawberry wall, in the direction of east and west, would be a useful adjunct in high gardening, if properly managed. On the south side, plant the Black Prince and the Keen's seedling, and on the north side the Elton. The former would ripen a fortnight earlier than ordinary ones, and the latter continue bearing until October. These walls may be built of any kind of material which will maintain its position, and should be as near to an angle of forty-five degrees as can be approached. They may be constructed after the manner shown in the engraving. Brick beds may

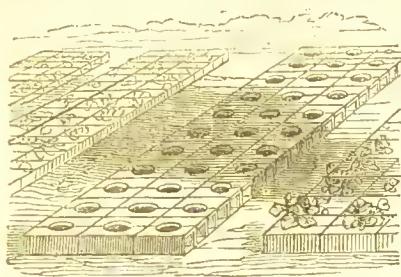


also be contrived with advantage for the culture of strawberries. The beds are flat upon the ground, as seen in the engraving, and about three feet wide; and between these are trenches, each about nine inches wide, and four-inch walls of brick on each side of the trenches, B, to keep up the earth



on the sides of the beds. The trenches are about the depth of two or three courses of bricks laid flat, without mortar, and are intended for the purpose of holding water, which is to be supplied whenever the ground is dry, while the plants are in fruit. By this method a much greater crop of fruit is obtained, and the plants continue bearing much longer than in beds where there are no trenches for water. The reflected heat obtained from strawberry walls, and which is so essential in perfecting the fruit, may also be secured by placing along the sides of the rows a course of tiles, or narrow slates, just as the blossom is beginning to appear; and on these the trusses of fruit will be quite dry, secured from the splashing of mud during heavy rains, the moisture will

be retained at the roots at the time it is most required for the plants, and all the advantages of increased heat will be secured to the fruit, which more cumbrous and expensive means can afford. As soon as the crop is gathered, these tiles or slates should be removed, as being no longer useful. A refinement on this mode is shown in the accompanying illustration, representing a



bed of young strawberry plants, with the tiles placed around them. These tiles have a semicircular hole cut out of their inner sides respectively, so that, in placing them around the plant, the leaves being carefully held up, one tile is placed on one side, and another on the other side. Another advantage these tiles have over paving tiles or slates is, that they stand on flange-like edges, thus allowing a circulation of air to act under them, and preventing the cold and damp affecting them, as to some extent would be the case were they laid flat on the ground. In regard to the preservation of the fruit during its growth and ripening, some have recommended laying tiles painted black around the plants; but this can have little effect in increasing heat, as the foliage will cover the tiles and prevent the direct rays of the sun from falling on them. Long narrow boards are sometimes laid along the rows. This precaution has its advantages, as has, also, laying twigs of birch, branches of furze, and heath. These, while they support the fruit from the ground, afford less shelter to snails and slugs, and keep the fruit drier. Some support the trusses of fruit by sticking in a row of small twigs on each side of the row, keeping the fruit-stalks in an upright position. This is a direct violation of the natural habit of the plant, the fruit of which, except the bush and common alpine, lies close to or reclining towards the ground. The gathering of the fruit should be performed when the plants and fruit are dry, more especially such fruit as is intended for preserving, and these should have the fruit gathered without any portion of the calyx or foot-stalk being left attached. With such fruit as are to be served up for dessert, the foot-stalks should be scrupulously preserved, and cut off with a pair of scissors to the length of an inch, or an inch and a quarter, according to the size of the variety. Those who gather them should put gloves on their hands, and if not, the hands ought to be washed clean.

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The strawberry is forced in every description of forcing house and also in the piuery. When they are forced in large quantities, it is a good method to apply a pit to their sole cultivation. The choice of suitable sorts, and planting them as early in the summer as young plants can be got, forms the first feature in the operation. The strawberry being a native of temperate and even cold climates, submits unwillingly to a high temperature; and when they are suddenly subjected to such, the effect becomes apparent by the slender appearance of the leaves and foot-stalks, and the absence of flowers. The sorts most suitable for forcing are the Black Prince, Grove End scarlet, Keen's seedling, and British Queen. They are put into a state of low excitement about the beginning of December, in the order in which they are named above. As early in summer as the young plants begin to show themselves upon the runners, three-inch pots should be plunged in the soil between the rows up to their brims; the runners are drawn over these pots, so that the young plant shall be placed in the centre of the pot, and kept in their places by means of small hooked pegs, and sometimes by placing a small stone upon them. The pots are filled with strong, rich, turf-loam, but not drained. They soon begin to make roots, and in about ten or fifteen days the pot will be full of them, at which time the plants are cut from the runners, and with the pots are removed to an open warm space, where they are shifted into the fruiting-sized pots, turning them out with the balls entire. In the case of the Black Prince which is a very small grower, the pots used measure four and a half inches in diameter; with the Grove End scarlet, five-inch pots are used; and with Keen's seedling and British Queen, which are both strong growers, six and a half inch pots are used. One plant only is placed in each pot. The soil used is fresh turf-loam, as strong as can be procured, but not entirely clay. The pots are well drained, and the soil rammed pretty tightly around the roots. No manure is used in the soil unless it is poor, but in the bottom of each pot should be placed two inches of rotten cow-dung, to be watered frequently with liquid manure. When the plants are potted, which they will be progressively, as young ones are procured, though no time should be lost, as the earlier they are potted the better, they are set upon a dry flooring of sifted coal-ashes, well soaked with lime-water for the destruction of worms, in beds of a convenient breadth, the pots standing quite close together, and each size arranged by itself. They are watered freely overhead with clean water applied through the rose of a watering-pot, and kept in this position till the frosts begin to set in, when they are placed in cold pits and covered with glass. Where the extent of pit sufficient for these operations does not exist, triangular banks may be thrown up, and the pots plunged lying on their sides, with their mouths upwards; or the pots may be built up against a wall, facing any aspect but the north, the uppermost course

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being protected by boards laid along. The usual way, however, is to plunge the pots in a bed of soil; but the plants will root less freely in this way; and if plunged at all, nothing is better than sifted coal-ashes. The strongest runners should be taken, as early in the season as they are pretty well rooted in the soil between the rows, and planted in small pots, placing them in cold pits or frames until the roots have filled the pots, and then shifting them into pots of a size suitable to the variety. Old plants may, however, be taken up carefully with their roots entire and placed in a tanked pit pretty closely together, working in soil between the halls. The operation should be performed early in October, and a very slight degree of bottom-heat applied till the end of November, when they will be found well-rooted and in a condition to commence growth upon the application of an increased degree of warmth from the tank. The object of this is to give the roots the start of the leaves; and to ensure this, while the roots are enjoying a temperature of fifty-five to sixty degrees, the tops should be kept at forty or forty-five degrees, and this can readily be done by abundant ventilation, even to the extent of keeping the lights off altogether during the mild weather, and only setting them on when the atmospheric temperature falls below these points. Where the convenience of tanked pits, or those having pipes in a vault below, is not at hand, then the pots may with great propriety be plunged in some material, such as tan, or leaves, undergoing a steady fermentation. When they have been thus root-excited, they may then be removed to the structure in which they are to fruit, beginning with temperature by day of fifty-five degrees, and at night falling to forty-five degrees, by fire-heat, admitting of a rise during sunshine of ten or fifteen degrees, for an hour or two only. In such a temperature and under such root-exciting principles, the plants will push strongly, and throw up vigorous flower-stalks, if kept sufficiently near the glass. As one set of plants is removed to the fruiting structure, another should take their place on the bottom-heat, to be preparing for their final removal. Strawberries, forced so as to ripen in April, and when the fruit has been gathered, planted out, not unfrequently produce a fair crop late in the autumn; and should they not begin to show their flower-buds, till so late as to prevent a chance of the fruit coming to perfection, if carefully lifted and planted in large pots, and brought progressively into a top temperature of from forty-five to fifty-five degrees, will often yield an excellent crop of fruit through the early part of winter, and before those heated in the usual way could be got sufficiently advanced. A bottom-heat of sixty degrees should be maintained, and the glasses kept shut close down until the roots have begun to grow, when air should be more abundantly supplied, particularly during their flowering period, at which time the atmospheric temperature should be gradually raised to sixty degrees during the day by fire-heat, falling

during the night to fifty-five degrees. When the fruit is fairly set and swelling, a degree or two more should be allowed, and ten or twelve degrees during sunshine for a few hours daily. As soon as they begin to throw up their flower-trusses, all the weakest parts of the plants should be removed as well as those that show no flower-huds. If plants be thus carefully taken up, and not subjected to too high a temperature, or deprived of sufficient air, they will produce excellent crops at much less expenditure of labour in watering, &c., than when grown on suspended shelves in the usual manner. Great care must, however, be taken to preserve the roots as entire as possible, for at the lifting-season they are charged with organisable matter for the nutrition of the plant when its growing season arrives; if, therefore, they are destroyed to any extent, so much of this nutrition is withdrawn from them. In placing strawberries in forcing-houses, they should be set upon shelves suspended from the roof, and as near the glass as possible, even should their leaves almost touch it. The feeders under the pots should be half-filled once a week or so with weak liquid manure, and as soon as the fruit is set, the trusses should be supported erect by sticking small twigs in the soil for the fruit to recline upon; without this support the weight of the fruit would cause the fruit-stalks to bend downwards over the edge of the pots, and hence greatly interrupt the free ascent of the sap at a time when the plants require it in greatest abundance. Strawberries on suspended shelves require a sufficient supply of water, but excess must be guarded against. The smallest and worst formed fruit should be carefully cut away with a pair of sharp-pointed scissors as soon as they show themselves; the nutrient which would be wastefully taken up by them will thus be directed to the larger and more perfect specimens. The strawberry is liable to the attacks of a variety of insects. The aphis sometimes attacks the plants in the open garden, but more frequently in the forcing-house. In the former case, dusting the crop over with finely powdered hot lime before the bloom appears is the remedy; in the latter, the usual recourse must be had to tobacco fumigation, but this should not be attempted after the blossom begins to expand. The red spider and the thrip also attack them in forcing-houses—a pretty clear indication of too high a temperature, and too limited an amount of humidity in the atmosphere of the house. The remedies already noticed should be attended to. The slug and snail are, however, the great enemies of the strawberry in the open garden, but a good watering with lime-water, or dressing the ground between the rows with hot lime just before the flowers begin to open, will in most cases secure the crop from their attacks. The larvae of St. Mark's fly are sometimes found in strawberry beds to the number of a hundred or upwards in one group. They seem, however, to prefer long undisturbed spots; hence their unwelcome appearance is much less to be dreaded when the one or two

years' system of planting is adopted, thus when the plautation is allowed to stand for several years. The larva which is of a dark brown colour, is to be found in October, in form somewhat cylindrical, flattened underneath, and nearly linear; head small, deep brown, and occasionally chesnut or light brown, very shiny. It has no feet. The mouth is furnished with indented jaws, palpi-jointed, as are also the lips and maxilla. The length of the full-grown larva is about three-quarters of an inch. It changes in March to a pupa of a pale ochreous colour. The face is heart-shaped; the antennæ short, brown, and curved; the abdomen cylindrical, terminated by two small spines. They remain in the pupa state for nearly five weeks, the males appearing about the end of April, and the females towards the middle or the end of May. The perfect insect, throughout the whole of this extensive genus, as regards males and females, is very dissimilar both as to size and colour. The head is longer in the male than in the female, and the wings are much lighter and smaller. The male is black, shining, covered with long soft hairs; the head and eyes large: antennæ short and nine-jointed; thorax round; abdomen long, tapering, the point blunt, armed with forceps; legs long, especially the hinder ones, as well as the thighs, which are broad and compressed. The eggs are deposited in May, but are not hatched before August. The eggs are laid in the earth, and also in the dung of horses and cows. They perforate the earth in manner similar to a honey-comb, and in this state live on the roots of the strawberry. Above the spot where the colony in its larva state is located, fine earth will be found turned up to the surface. When such is observed, the nest should be dug up, and the larvae searched for and destroyed.

STRAWBERRY FOOL.—Bruise a pint of strawberries and a pint of raspberries, pass them through a sieve, and sweeten them with half a pound of fine sugar pounded, add a spoonful of orange-flower water, then boil it over the fire for two or three minutes; take it off, and set on a pint and a half of cream, boil it and stir it till it is cold; when the pulp is cold, put them together, and stir them till they are all well mixed; serve the mixture in glasses or cups.

STRAWBERRY ICE.—Take the pulp of two pounds and a half of strawberries and of half a pound of red currants, rubbed through a sieve, and a pint of water in which the sugar has been dissolved; mix these well together, and put them into the freezing pail. If strawberry cream be required, take the juice of the fruit, strain it, and add it to the cream with a little lemon-juice; whisk the whole with the sugar, and set out to freeze.

STRAWBERRY ISINGLASS JELLY.—Boil together quickly for fifteen minutes, one pint of water and three-quarters of a pound of very good sugar; measure a quart of ripe richly-flavoured strawberries without their stalks; the scarlet answer best, from the colour which they give; on these

pour the boiling syrup, and let them stand all night. The next day, clarify two ounces and a half of isinglass in a pint of water, drain the syrup from the strawberries very closely, add to it two or three tablespoonfuls of red currant juice, and the clear juice of one large or two small lemons; and when the isinglass is nearly cold mix the whole, and put it into moulds. The French, who excel in these fruit jellies, always mix the separate ingredients when they are almost cold; and they also place them over ice for an hour or so after they are moulded, which is a great advantage, as they then require less isinglass, and are in consequence much more delicate. When the fruit abounds, instead of throwing it into the syrup, bruise lightly from three to four pints, throw two tablespoonfuls of sugar over it, and let the juice flow from it for an hour or two; then pour a little water over, and use the juice without boiling, which will give a jelly of finer flavour than the other.

STRAWBERRIES.—Water, 1 pint; sugar, $\frac{1}{2}$ lb.; strawberries, 1 quart; isinglass, $2\frac{1}{2}$ ozs.; water, 1 pint (white of egg, 1 to 2 teaspoonfuls); juice, 1 large or 2 small lemons.

STRAWBERRY JAM.—Bruise very fine the strawberries gathered when quite ripe, and add to them a small quantity of red currant juice. Beat and sift sugar equal in weight to the fruit, which strew over them, and place the whole in the preserving pan; set them over a clear slow fire, skim them, and then boil for twenty minutes, and put into glasses.

STRAWBERRY JELLY.—Put the fruit into an earthen pan, squeeze them well with a new wooden spoon; mix an equal weight of sugar, in large lumps, with the fruit; and let them infuse for an hour, that the sugar may draw out the juice; next pour on a little water. If the strawberries are too ripe, squeeze in the juice of two lemons, put all this into a jelly-bag nearly new; mix some melted isinglass with the juice, but the whole must be very cold. The proportion of isinglass before melting should be at the rate of an ounce to four pounds of fruit.

STRAWBERRY MARMALADE.—Crush two pounds of fine strawberries, and pass them through a sieve; then mix them with a strong syrup of two pounds of sugar, and stew the whole in a pan till properly done.

STRAWBERRY SOUFFLÉ.—Stew the strawberries with a little lemon-peel, sweeten them, then lay them pretty high round the inside of a dish; make a custard of the yolks of two eggs, a little cinnamon, sugar, and milk. Let it thicken over a slow fire, but not boil. When ready, pour it into the inside of the strawberries. Beat the whites of the eggs to a strong froth, and cover the whole. Throw over it a good deal of pounded sugar, and brown it of a fine brown. Any fruit made of a proper consistency does for the walls. Strawberries when ripe are delicious.

STRAWBERRY TARTLETS.—Take a full half-pint of freshly-gathered strawberries, without the stalks; first crush, and then mix them with two ounces and a half

of powdered sugar; sift to them by degrees four well-whisked eggs, beat the mixture a little, and put it into patty pans lined with fine paste; they should be only three parts filled. Bake the tartlets from ten to twelve minutes.

STRAWBERRY VINEGAR.—Take the stalks from the fruit, which should be of a highly flavoured sort, quite ripe, fresh from the beds, and gathered in dry weather; weigh and put it into large glass jars, or wide-necked bottles, and to each pound pour about a pint and a half of fine pale white wine vinegar, which will answer the purpose better than the entirely colourless desorption sold under the name of distilled vinegar. Tie a thick paper over them, and let the strawberries remain from three to four days; then pour off the vinegar and empty the bottles into a jelly-bag, or suspend them in a cloth, that all the liquid may drop from them without pressure; replace them with an equal weight of fresh fruit, pour the vinegar upon it, and three days afterwards repeat the same process, diminishing a little the proportion of strawberries, of which the flavour ought ultimately to overpower that of the vinegar. In from two to four days drain off the liquid very closely, and after having strained it through a linen or a flannel bag, weigh it and mix with it an equal quantity of highly refined sugar, roughly powdered; when this is nearly dissolved, stir the syrup over a clear fire, until it has boiled for five minutes, and skim it thoroughly; pour it into a clean stone pitcher, or into large china jugs; throw a thick folded cloth over it, and let it remain until the next day. Put it into pint or half-pint bottles, and cork them lightly with new velvet corks, for if these be pressed in tightly at first the bottles will sometimes burst. In four or five days, they may be closely corked and stored in a dry and cool place. Damp destroys the colour and injures the flavour of these fine fruit vinegars. A spoonful or two in a glass of water affords an agreeable summer beverage. They make also admirable sauces for puddings. Where there is a garden the fruit may be thrown into the vinegar as it ripens, within an interval of forty-eight hours, instead of being all put to infuse at once, and it must then remain in it a proportionate time; one or two days in addition to the period specified will make no difference to the preparation. The enamelled stewpans are the best possible vessels to boil in; but it may be simmered in a stone jar set into a pan of boiling water, when there is nothing more appropriate at hand, though the syrup does not usually keep so well when this last method is adopted. Raspberries and strawberries mixed, will make a vinegar of very pleasant flavour; black currants also will afford an exceedingly useful syrup of the same kind.

 Strawberries, 4lb.; vinegar, 3 quarts; vinegar drained, and poured on fresh strawberries, 4lb.; 3 days drained again on to fresh fruit, 3 to 4lb.; 2 to 4 days to each pound of the vinegar; 1lb. of highly refined sugar, boiled 5 minutes, lightly corked, 4 to 5 days.

STRAWBERRY WATER.—Put some very ripe strawberries into a linen cloth, and press out the juice. Transfer this into a wide-mouthed bottle, leaving the mouth open, and hang it up in the sun until the juice has become clear; then pour it off gently into another vessel, taking care not to disturb the sediment, and beat it up in the proportion of half a pint of juice with a quart of water, and a quarter of a pound of sugar; then strain through a jelly-bag.

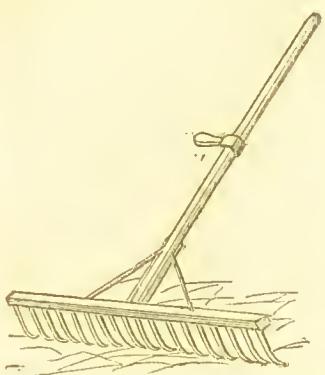
STRAWBERRY-WATER ICE.—One large potle of scarlet strawberries, the juice of a lemon, a pound of sugar, or one pint of strong syrup, and half a pint of water. Mix, first rubbing the fruit through a sieve, and freeze.

STRAWBERRY WINE.—For making this wine, equal quantities of water and of juice are required. The fruit must be thoroughly bruised, and in order to do this properly, small portions should be squeezed at a time; then add the water, mix it well, and allow it to stand for forty-eight hours; the mixture must then be pressed through a sieve into the fermenting tub, the juice and water measured, and any deficiency in quantity made up, by putting as much water upon the refuse of fruit as is necessary. The fruit must again be squeezed, and the juice strained into the former quantity. Two days before casking, sixteen pounds weight or more of strawberries, must be tied up in a piece of thin muslin, and put in the fermenting tub, in order to impart to the wine a flavour of the fruit. As the process of fermentation in a great measure dissipates this flavour, the more fruit employed in this way, the higher will be the aroma of the wine. Should more fruit be used than sixteen pounds, it would be better to tie it up in two separate parcels. Immediately before casking, the fruit should be taken from the muslin and the juice, and squeezed through the sieve into the *mast*. The after-treatment is the same as for currant wine.

STRAWBERRIES, MODE OF EATING.—Take off the stalks from as many strawberries as will form one layer at the bottom of a dish, sift some fine sugar over them; then place another layer and sift again; each layer will be found smaller than the preceding. When there are five or six layers, cut a fresh lemon, and squeeze the juice all over them. Before they are served out, let them be gently disturbed, that they may have the benefit of the lemon-juice and sugar. They may thus be eaten heartily of without apprehending any danger, and are greatly to be preferred to the usual method of eating them with cream.

STRAWBERRIES, TO PRESERVE ENTIRE.—Take an equal weight of fruit and pounded loaf-sugar; lay the former in a large dish, and sprinkle over them the sugar; give the dish a gentle shake, in order that the sugar may reach the under part of the fruit; next make a thin syrup with the remainder of the sugar, and add one pint of red currant juice to every three pounds of strawberries. In this, simmer them till sufficiently jellied. Choose the largest strawberries, not over-ripe.

STUBBLE RAKE.—The gleanings of the stubble are an object of considerable value in reaping; and to secure them for the benefit of the farmer, different methods are employed. The principal and the most effectual of them is the stubble rake, as shown in the annexed figure. The teeth are of iron,



seven inches in length, and set at four inches apart, but formed in the lower portion so that the bend rests on the ground, preventing the points of the teeth penetrating and mixing the earth with the gleanings. The best method of fixing the teeth is by a screw-nut, as they are thereby easily removed, in case of being broken, without risk of injuring the head.

STURGEON.—A fish that migrates from the sea to fresh water; but never going any distance from land, and only growing to its usual size in large rivers. It is occasionally taken in the Thames, but is to be found in its primest condition in the rivers Eske and Eden. Its flesh is much esteemed, being delicate, firm, and white as veal, which it so much resembles.

STURGEON BOILED.—Having cleaned a sturgeon well, boil it in as much water as will just cover it; add two or three pieces of lemon-peel, some whole pepper, a stick of horseradish, and a pint of vinegar to every half-gallon of water. When done, garnish the dish with fried oysters, sliced lemon, and horseradish, and serve it up with melted butter and anchovy.

STURGEON BRAISED.—Put some slices of sturgeon into a braising-pan, with slices of veal and rashers of bacon, half a pint of white wine, a bunch of sweet herbs, two or three onions, a seasoning of salt and pepper, and a little good stock or gravy, which serve with the fish.

STURGEON BROILED.—Divide the fish into cutlets; rub each cutlet over with the yolk of an egg well beaten; cover with chopped parsley, some grated bread crumbs, pepper and salt; wrap them in buttered paper, and broil them. Serve with melted butter and oyster sauce.

STURGEON FILLETS.—Cut the fish into small thin slices; lay them on a fire-proof

dish, with a slice of butter, a little salt and pepper, and put them over a very slow fire; when the slices of fish are done on one side, turn them; when quite done, which will be in about twenty minutes, take them out of the dish, and add to the sauce a little flour, which mix well with the butter, also three or four shallots, and a little parsley chopped fine; put the fish again into the sauce, and set it over the fire, but do not allow it to boil; serve with the sauce thrown over the fish, and the dish garnished with sippets of bread, fried brown in butter and drained.

STURGEON ROASTED.—Cut the fish into slices, place them on a spit securely, and roast them. Keep it continually basted with butter, and when nearly done, dredge with bread crumbs. When the flakes begin to separate, it is done. It will take about half an hour before a brisk fire. Serve with good gravy, thickened with butter and flour, and enriched with an anchovy, or glass of white wine, and the juice of half a lemon may be added.

STURGEON STEWED.—Take enough gravy to cover the fish; set it on with a tablespoonful of salt, a few corns of black pepper, a bunch of sweet herbs, two onions, scraped horseradish, and a glass of vinegar. Let this boil a few minutes, and set it aside to become partially cool; then add the fish; let it boil gradually, and stew gently till it begins to break. Take it off immediately; keep it warm; strain the gravy, and thicken it with a good piece of butter; add a glass of port or sherry, a little nutmeg and lemon-juice. Simmer, till it thickens, and then pour it over the fish. Serve with anchovy sauce.

STYPTICS.—Applications, usually of an astringent character, which possess the power of arresting a flow of blood. Oak-bark decoction, and gall-nuts in powder or infusion, which owe their efficacy to the tannin they contain, are used as external styptics. Matico and turpentine are styptics derived from the vegetable kingdom; also, the organic fungus, popularly known as the "fuz-ball," which is frequently applied to bleeding wouds, and with apparent benefit.

SUCKERS, PROPAGATION OF.—The season for taking up and transplanting suckers of trees and shrubs, is any time in open weather from October till March, being careful to dig them up from the mother-plant with as many of the root-fibres as possible, trimming them ready for planting, by shortening the long straggling fibres, and cutting off any thick-knotted part of the old root that may adhere to the bottom, leaving only the fibres arising from the young wood. Preparatory to planting them out, the stems of the shrub and tree-suckers should likewise be trimmed occasionally by cutting away all the laterals; and any having long, slender, and weak tops, or such as are intended to assume a more dwarfish or bushy growth, may be shortened at top in proportion, to form about half a foot to one or two feet in length, according to their nature or strength; and others that

are stronger, or that are designed to run up with tether stems, may have their tops left entire, or shortened but little. When thus taken up and trimmed, they should be planted out in rows in the nursery, the weak suckers separately in close rows, and also the shortened and stronger plants, each separately in wider rows, so that the rows may be from one to two feet asunder, in proportion to the size and strength of the suckers; and after being thus planted out, they should have the common nursery culture of clearing from weeds in summer, and digging the ground between the rows in winter, &c., and, in from two to three years, they will be of a proper size for planting out, where they are to remain. Some kinds of trees and large shrubs produce suckers strong enough in one season to be fit for planting where they are to remain, as well as some sorts of roses, and numerous other flowering shrubs; also, some plants of the strong shooting gooseberries, currants, raspberries, and similar kinds. It may be generally observed of such trees and shrubs as are naturally disposed to send up many suckers, that by whatever method they are propagated, whether by seeds, suckers, layers, or cuttings, they commonly still continue their natural tendency in this respect. When, therefore, it is desired to have any sorts to produce as few suckers as possible, not to over-run the ground or disfigure the plants, it is proper, both at the time of separating the suckers or planting them off from the main plants, and at the time of their final removal from the nursery, to observe if, at the bottom part, they show any tendency to emit suckers, by the appearance of prominent buds, and if so, they should be pared down as closely as possible. As, however, many sorts of trees and shrubs are liable to throw out considerably more than may be wanted, they should always be cleared away annually at least; and in such as are not wanted for increase, it is proper to eradicate them constantly, as they are produced in the spring and summer seasons. Numerous herbaceous and succulent plants are also productive of bottom offset suckers from the roots, by which they may be increased. In slipping and planting these sorts of offset suckers, the smaller ones should be planted in nursery beds, pots, &c., according to the nature of growth and temperature of the different sorts, to have the advantage of one summer's advanced growth; and the larger ones to be set at once where they are to remain in beds, borders, pots, &c., according to the different sorts or descriptions of them. The suckers of many of the finer kinds of flower plants, as the auricula and others, may be separated or taken off from the parent plants any time between the months of February and August, as they become of a proper size, or are wanted for increase; but if they are not required for this use, they should not be suffered to remain. They can often be slipped off by the fingers, or a sharp piece of wood, without removing much earth, or the plants from the pots; but when they are large, and cannot be thus

separated with a sufficient number of fibres to their bottom parts, they may be taken out of the pots, and be removed by the knife without danger, which, perhaps, is the best way, as affording most fibres. The suckers of such old flower-plants, when they are wanted to blow strong, should always be taken off without disturbing the plants in the pots, especially when they are few. The suckers, in all cases of this sort, should constantly be planted as soon as possible after they are slipped, in appropriate small upright pots, giving a slight watering at the time, with suitable temporary shade. They should be placed in proper situations, away from the droppings of trees, and they will thus soon become rooted. The suckers of such flower-plants must, however, never be removed after the litter of the above-named periods, as they have then finished shooting, and have become inactive.

SUÉDOISE OF PEACHES.—Pare and divide four fine ripe peaches, and let them simmer only from five to eight minutes in a syrup made with the third of a pint of water and three ounces of white sugar, boiled together for fifteen minutes; lift them out carefully into a deep dish, and pour about half the syrup over them, and into the remaining half throw a couple of pounds of quite ripe peaches, and boil them to a perfectly smooth, dry pulp or marmalade, with as much additional sugar in fine powder, as the nature of the fruit may require. Lift the other peaches from the syrup, and reduce it by very quick boiling more than half. Spread a deep layer of the marmalade in a dish, arrange the peaches symmetrically round it, and fill all the spaces between them with the marmalade; place the half of a blanched peach-kernel in each, pour the reduced syrup equally over the surface, and form a border round the dish with macaroons; or, in lieu of these, with candied citron, sliced very thin, and cut into leaves with a small paste-cutter. A little lemon-juice brings out the flavour of all preparations of peaches, and may be added with good effect to this.

Peaches, 4 large, and 2 lbs.; sugar, $\frac{1}{2}$ to $\frac{1}{4}$ lb.; lemon-juice, 1 tablespoonful; citron or macaroon, as required.

SUET.—To have fresh suet is an essential point, for, should any portion be at all musty, it will entirely destroy the pie or pudding. Beef is the best, veal the next, especially for making crust; but mutton is the lightest for dumplings. The best method for keeping suet is to wipe the piece carefully, sprinkle a little salt or flour over it, and hang it up in a cool place. If the pieces are too small to be hung up, put them on a plate carefully, and add a little fresh flour or salt.

SUET CRUST.—Mix together while dry three-quarters of a pound of beef suet, chopped fine, and a pound of flour with a little salt; then make into a stiff paste with cold water or lukewarm milk; work it well, rolling it out two or three times, and in the intervals beat it with the rolling-pin, if for pies; or omit this for puddings, as it will then be lighter.

SUET DUMPLINGS.—Make as for suet puddings, and drop into boiling water, or into the boilings of beef; or they may be boiled in a cloth.

SUET DUMPLINGS, WITH Currants.—Take a pint of milk, four eggs, a pound of suet shred fine, and a pound of currants well cleaned, two teaspoonfuls of salt, and three teaspoonfuls of giuger; first take half the milk, and mix it to the consistence of a thick batter, then put in the eggs, the salt, and ginger, then the remaiader of the milk by degrees, with the suet and currants, and flour enough to make it into light paste. Make the dumplings of about the size of an apple, flatten them a little, put them into boiling water, move them softly to prevent them sticking together, keep the water boiling, and, in rather more than half an hour, they will be done.

Milk, 1 pint; eggs, 4; suet, 1 lb.; currants, 1 lb.; salt, 2 teaspoonfuls; ginger, 3 teaspoonfuls; flour, sufficient.

SUET DUMPLINGS, WITH EGGS.—Mix together a pint of milk, two eggs, three-quarters of a pound of beef-suet shred fine, a teaspoonful of ginger, and flour enough to convert the whole into a moderately stiff paste. Make the paste into dumplings, roll them in a little flour, and put them into boiling water. Move them gently for a short time, to prevent them sticking together. If the dumplings are small, three-quarters of an hour will boil them; if large, the time must be proportioned to their size. They will boil best in cloths, which keep the outsides drier.

Milk, 1 pint; eggs, 2; suet, $\frac{1}{2}$ lb.; ginger, 1 teaspoonful; flour, sufficient.

SUET PUDDING.—Shred a pound of suet; mix with a pound and a quarter of flour, two eggs beaten separately, a little salt, and as little milk as will make it boil four hours. It eats well next day cut in slices, and broiled. The outward fat of loins or necks of mutton finely shred, makes a more delicate pudding than suet.

SUET PUDDING, WITH EGGS.—To a pound of beef suet chopped very fine, add six tablespoonfuls of flour, a teaspoonful of grated giuger, and a teaspoonful of salt. Gradually mix with these ingredients a quart of milk, and four eggs well beaten. Boil the whole three hours in a buttered basin, or two hours and a half in a cloth well floured.

Suet, 1 lb.; flour, 6 tablespoonfuls; ginger, 1 teaspoonful; salt, 1 teaspoonful; eggs, 4.

SUET, TO CLARIFY.—The kidney fat of beef, mutton, or veal, must be cut into small pieces, and be put into a water-bath, or in a cool oven; or on a very cool hot-plate or stove; the slightest increase of temperature more than sufficient to liquefy the fat gives a taste of burning which is not pleasant. If there is no water-bath at hand, an earthenware jar immersed in a saucepan of water, and covered all over with a saucepan-lid, answers every purpose. Whichever plan is adopted, the process must

be very slow, as the cells in which the fat lies take a long time to empty themselves. When the lumps have shrunk almost to nothing, strain the whole through a sieve, and increase the heat a little for the remaining portion, the wafer-bath not being sufficient to extract all the fat. Keep this last part separate, as it is only fit for frying, and not for pastry; tie down the jar when cold, and either suet or lard will then keep a long time.

SUET, TO PRESERVE.—Select the firmest part of suet, and free it from skin and veins. Set it beside the fire in a delicately clean saucepan, and regulate the heat so that it may melt without frying, or it will acquire an unpleasant flavour. When melted, pour it into a pan of cold water. When in a hard cake, wipe it very dry, fold it in fine paper, then in a linen bag, and keep it in a dry cool place. When used, scrape it fine.

SUFFOLK DUMPLINGS.—Make a very light dough with yeast, as for bread, but with milk instead of water, and with salt added. Let it rise for an hour before the fire. Twenty minutes before the dumplings are to be served, have ready a large stewpan of boiling water, make the dough into balls the size of a medium dumpling, throw them in, and boil them for twenty minutes. To ascertain when they are done enough, stick a fork into one, and if it come out clear, it is done. Before serving, tear them apart on the top with two forks, as they become heavy by their own steam. Serve with bread and butter, or sugar, or salt.

SUGAR, ADULTERATION OF.—The adulteration of sugar chiefly consists in the mixing together, in various proportions, of sugars of different qualities and prices, none of which are very pure and some highly impure; an article is thus prepared presenting a tolerable appearance to the eye, but which is really one of very great impurity, and rarely what it professes to be. The impure sugars are dark coloured, imperfectly crystallized, heavy and clammy, readily caking into masses: examined with the microscope they are found to contain fragments of cane, woody fibre, grit, &c. Nearly all the brown sugars imported into this country, contain a large amount of impurity, but in general the sugar procured from the grocer does not alone contain this same amount; but it is increased, sometimes doubled and trebled, by the use of variable proportions of other sugars still more impure, in fact, the most impure that can be purchased; so that, in the state in which it reaches the public, it is very unfit for use. Sugar is sometimes adulterated with flour. This is used partly to improve the colour of very dark and bad sugar, and partly to cause the absorption of the water of the treacle with which dark-coloured sugars are in general contaminated. Pieces of woody fibre, and stony particles, or grit, are also commonly found in sugar. The impurities and adulterations of sugar may be detected by the appearance of the sugar, by the touch, by the effect of its contact with paper, by the microscope, and by chemicals. *By the appearance*—A pure sugar

is light-coloured, highly crystalline, and very dry. Impure sugars are dark-coloured, imperfectly crystalline, small grained, often presenting an earthy appearance, damp, and heavy. *By the touch*—A good sugar should be perfectly dry to the touch, and should not feel in the least sticky or clammy when pressed between the fingers; on the other hand, a bad sugar, when treated in the same way, feels moist and sticky. *The effect of contact with paper*—The thick sugar paper is generally employed by grocers on account of its absorbent power. When the quantity of moisture is very great, owing to the admixture of grape-sugar, treacle, &c., the thick sugar-paper absorbs a portion of the fluid, and becomes wetted and stained; the extent of the discoloration, and the state of the paper as respects moisture, affording a very good criterion as to the quality of the sugar. This is a very simple and excellent method of ascertaining, in many cases, the quality of sugar, which, in addition to staining the paper, if impure from admixture with treacle and grape-sugar, will also become hard and caked; in doubtful cases, the sugar should be allowed to remain in the paper for two or three days. The quantity of this water present in many sugars is so great, that it adds very considerably to the weight; for every drachm of water to the pound of sugar there must be just so much less of pure cane-sugar; so that as a question of economy merely, putting aside all ideas of purity, cleanliness, and health, it is very doubtful whether the buyer becomes a gainer by the purchase of the cheaper, less pure, and much heavier sugars. *By the microscope*—By means of this instrument the presence of the sugar acari, the spores of fungus, fragments of cane, wood, and starch granules, may be ascertained, and the adulteration by means of flour, &c., determined. By absolute test the fact has been arrived at that the brown sugars of commerce are, in general, in a state wholly unfit for human consumption, and the inferior sorts should be especially avoided. Lump sugar is free from the greater part of the impurities and adulterations by which brown sugar is so largely contaminated and deteriorated; it does not contain acari, fungi, grape-sugar, albumen, or grit, the chief impurities consisting of starch granules, and microscopic chips, or fragments of woody fibre. The general use of refined or lump sugar is, therefore, to be recommended. The quality of the lump sugar is comparatively a secondary consideration, as the worst lump sugar is infinitely more pure than the best brown sugar that can be obtained.

SUGAR BISCUITS.—Cut some butter into flour. Add sugar and caraway seeds; pour in the brandy, and then the milk. Lastly, put in pearl-ash; stir all well with a knife, and mix it thoroughly, till it becomes a lump of dough. Flour a paste board, and lay the dough on it. Knead it very well; divide it into eight or ten pieces, and knead each piece separately. Then put them all together, and knead them very well into one lump. Cut the dough in half, and roll it out into sheets, about half

an inch thick. Beat the sheets of dough very hard on both sides with the rolling-pin. Cut them out into round cakes with the edge of a tumbler. Butter iron pans and lay the cakes in them. Bake them of a very pale brown. If done too much, they will lose their taste. Let the oven be hotter at the top than at the bottom. These cakes kept in a stone jar, closely covered from air, will continue perfectly good for several months.

SUGAR - BROWNING.—Pound, very finely, six ounces of the best refined sugar, and put it into a small and very clean frying-pan, with a glass of water. As it dissolves, mix well with a wooden spoon, and withdraw the pan from the fire when the fluid begins to boil fast; stir, and keep it thus till it has acquired the rich dark brown colour desired. It may be seasoned either with pepper, salt, cloves, ketchup, &c., or not, but is generally more useful plain. When cold, skim the browning, and bottle it in vials for use.

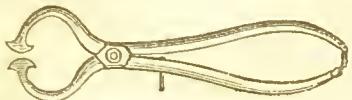
SUGAR CAKES.—Take half a pound of dried flour, the same quantity of fresh butter, washed in rose water, and a quarter of a pound of sifted loaf sugar; then mix together the flour and sugar, rub in the butter, and add the yolk of an egg beaten with a tablespoonful of cream; make it into a paste, roll, and cut it into small round cakes, which bake upon a floured tin.

Flour, $\frac{1}{2}$ lb.; butter, $\frac{1}{2}$ lb.; loaf sugar, $\frac{1}{2}$ lb.; egg, 1; cream, 1 tablespoonful.

SUGAR CANDY.—Clarify four pounds of lump sugar, which must be allowed to simmer with a little water, over the fire, until, by taking up a little on a spoon, and blowing it, it flies off in small flakes; then, having skimmed it well, take it off the fire; throw into it a quarter of a wineglassful of good spirits of wine, and pour the whole out into an earthen dish; cover it over, and put it into an oven for eight days, taking care to keep it of an equal temperature. At the end of that time, drain off the syrup, and the candy will remain attached to the dish, which must be warmed in order to allow the candy to be more readily detached.

SUGAR, DIETETIC PROPERTIES OF.—As an article of diet, sugar is the representation of the saccharine principles which include gum, starch, &c.; its nutritive properties are very great, and it appears to form the basis more or less of all those vegetable and farinaceous substances which give the greatest support to human life. With regard to the digestibility of sugar by different individuals, there is considerable variation. Some persons cannot consume it, even in small quantity, without being disordered and suffering from acidity, while others seem to digest their food more readily when an amount of saccharine is mingled with it. As a general rule, persons whose digestive powers are feeble should not indulge extensively in the use of sugar; but for persons in ordinary health a moderate proportion of this pleasant aliment is a wholesome article of nutriment.

SUGAR NIPPERS.—This implement is extremely convenient for breaking up loaf-



sugar into pieces of any size desired; their application is self-explanatory.

SUGAR PLUMS.—Under this general head are included the whole variety of articles of this kind sold by the confectioners, from the common sugar-plum to the almond and other kernels, covered with sugar, and also the compound paste of fruit and sugar. They are made in the following way:—Take a copper pan or basin, in the form of a stewpan, having two holes through which it may be suspended by cords from a ceiling, and a kind of handle from the middle, to facilitate the frequent agitation by the hand; let this pan be suspended about four inches from a brazier of charcoal, and having put the articles which are to be covered with sugar into the pan with some strong syrup, shake the pan, so that every part of the contents may be covered, and keep agitating them till the sugar is dry; then add more sugar and agitate again till dry; continuing to do this until the desired thickness is attained. If blanched almonds, or other nuts be put into the pan in this way, they will acquire any thickness of sugar required, and their original shape will be preserved.

SUGAR RUFFS.—A pound of powdered and sifted sugar, beaten well with the whites of three eggs, and flavoured with oil of cinnamon, lemons, or orange-flower water, and baked in the same way as the meringues, served in a napkin or used to garnish dishes of preserves.

Sugar, 1lb.; eggs, 3 whites; flavour with oil of cinnamon, lemons, orange-flower water.

SUGAR, TO BOIL.—To every pound of sugar, allow half a pint of water, stir it over the fire till the sugar be entirely dissolved; when it first boils up, pour in a little cold water, and when it boils a second time, take it off the fire, let it settle ten minutes, carefully skim it, and boil it for half an hour, or a little longer, and then put in the fruit.

SUGAR, TO CLARIFY.—To every three pounds of loaf sugar, allow the beaten white of one egg, and a pint and a half of water; break the sugar small, put it into a nicely-cleaned brass pan, and pour the water over it; let it stand some time before it be put upon the fire, then add the beaten whites of the eggs; stir it till the sugar be entirely dissolved, and when it boils up, pour in a quarter of a pint of cold water, let it boil up a second time, take it off the fire, and let it settle for fifteen minutes; carefully take off all the scum, put it on the fire, and boil it till sufficiently thick, or if required, till candy high, in order to ascertain which drop a little from a spoon into a small jar of cold water, and if it becomes quite hard it is then sufficiently done; or dip the spoon

into the sugar, plunge it into cold water, draw off the sugar which adheres to the spoon, and if it be hard, and snaps, the fruit to be preserved must be instantly put in and boiled.

SUGAR VINEGAR.—Put nine pounds of brown sugar to every six gallons of water, boil it for a quarter of an hour, then pour it into a tub in a lukewarm state, put to it a pint of new barm, let it work for four or five days, stir it up three or four times a day, then turn it into a clean barrel iron-hooped, and set it full in the sun. If you make it in February, it will be fit for use in August. You may use it for most sorts of pickles, except mushrooms and walnuts.

SULPHUR.—The form and colour of roll-sulphur is sufficiently well known; it is made by simply fusing the sublimed sulphur, and casting it in the form of sticks. The "flowers of sulphur" is made by sublimation. In medical practice, sulphur is variously employed, its best known application, however, being for the cure of itch, in the form of ointment. In various skin diseases sulphur may be taken with benefit. It is also useful when mild laxatives only are required. For the latter purposes it is advantageously mixed with three or four times its weight of cream of tartar, or with its own weight of magnesia. The flowers of sulphur is the form in most common use but the precipitated or milk of sulphur is rather a more elegant preparation. One very serious objection to the use of sulphur is the unpleasant odour it imparts to the person, particularly to the insensible perspiration. The dose of sulphur as a laxative is, alone, two drachms; when mixed with cream of tartar or magnesia, from half a drachm to a drachm.

SULPHUR OINTMENT.—Mix four drachms of sublimed sulphur, two ounces of lard, and two drachms of sulphuric acid together. This is to be rubbed into the body.

SULPHURIC ACID.—This is applied in fixed rheumatic pains and old sprains, as an ointment, thus:—One drachm of the acid to one ounce of hog's lard. In itch, half a drachm of acid to one ounce of hog's lard. *Acidum sulphuricum dilutum*—dilute sulphuric acid. This is made by adding, gradually, three drachms by measure of the strong acid to four ounces of water. It is employed as a tonic, an astringent and cooling medicin. It is given in indigestion, spitting of blood, eruptions on the skin, putrid sore throat, hectic, recoveries in fevers, to stop salivation, and to strengthen the digestive organs. The dose is ten to forty drops, largely diluted. It must be sucked through a quill, and the mouth well rinsed after each dose. If it causes a gripping pain in the bowels, add to it a little syrup of poppies. When employed as a gargle, three drachms of acid to eight ounces of water. In skin diseases, as the summer rash, chronic nettle rash, and for relieving a distressing itching and tingling of the skin, no remedy is more serviceable than a weak lotion of this acid, and also in those forms of indigestion connected with an alkaline state of the

stomach. Half a drachm of saltpetre, and two ounces of sulphuric acid placed on a saucer, and heated over a small fire or lamp, is used to fumigate rooms, vessels, &c., after fever or other contagious diseases.

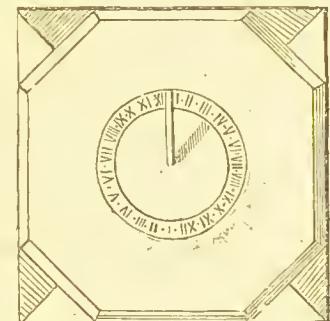
SUNBURNS —Very frequently the redness apparent upon the face after exposure to the sun, arises from a disturbed digestion, and if there are such symptoms as headache, tormented tongue, irregular bowels, &c., the fact is established, and means of cure should be adopted. If, however, the skin is so sensitive as to be readily tanned by exposure, the following remedy may be made use of: Take two drachms of borax, one drachm of Roman alum, one drachm of emphor, half an ounce of sugar candy, and a pound of ox-gall. Mix and stir these ingredients well together for ten minutes or so, and repeat this stirring three or four times a day for a fortnight, till it appears clear and transparent. Strain through blotting paper, and bottle for use.

SUN DIAL.—The sun dial forms a very appropriate ornament for gardens, pleasure-grounds, &c. It may be made in a variety

and a half. The seed being of a farinaceous oily quality, is given as a cheap, substantial, and nourishing food for neat cattle, sheep, swine, and all sorts of poultry, and may be used either in the mealy state or that of cake, after it has been expressed or manufactured into oil. The flower affords very superior pasture for bees. The large stems and roots may be used for lighting fires. The refuse from one acre after the oil has been extracted produced 1500 lbs. of oil-cakes; the stalks, when burnt for alkali, gave ten ewts. of potash. They may also be bruised and steeped like flax, and made into packthread and bags. A whitish brown paper is made from the heads after the seed is taken out. The plant thrives in an open situation on any soil, and, as it derives most of its nourishment from the atmosphere, having small roots, it serves rather to improve than exhaust the soil. The seed should be drilled into the ground, the distance from row to row eighteen inches, and the plants should be thinned out to thirty-six inches from plant to plant. The number of plants at this distance would be about 14,500 per acre; at eighteen inches from plant to plant 25,000 per acre. Keep clean from all sorts of weeds, and when the plants are well up work with a single-horse hoe plough between the rows, and with a hand-hoe close to the plants. Prune when small heads appear out of the sides of each leaf. The flowers appear in succession for a considerable period. Harvest in baskets as the heads ripen.

SUNSTROKE.—When the heat becomes very intense, particularly if there be direct exposure to the rays of the sun, the brain is apt to be affected by what is termed sun-stroke. The affected person falls insensible, the face is flushed and swoleu, and the blood-vessels beat violently. The most efficacious remedies are the pouring of cold water on the head, and the administration of a small quantity of stimulant, ammonia or brandy.

SUPPER-EATING, CAUTIONS RESPECTING.—Although, generally speaking, the eating of suppers is unwholesome, still, much depends upon circumstances. In ordinary cases, animal food once a day is sufficient for most persons; if, therefore, an individual for whom it is enough, after a hearty meat dinner adds a superfluous meat supper, the chances are that he will pay the penalty in disturbed sleep, and rise in the morning with a furred tongue and a feeling of languor. This is especially the case if the superfluity be indulged in after a dinner made in the latter part of the day. If dinner is eaten early, if much exercise is taken between that and the evening meal, and if supper is not eaten at too late an hour, many persons may take with benefit a moderate proportion of animal food. It is undoubtedly better not to eat a meal heavy, either in quantity or quality, before a period of inactivity and sleep so prolonged as that of the night; but there is no doubt that much of the bad character of supper as a meal arises from its being too often one



of styles, the accompanying figure shewing one of a very simple and inexpensive kind.

SUNFLOWER.—The perennial or American sunflower is at present much cultivated, particularly near large towns, where it bears the smoke well, and produces fine, yellow, double flowers. This sort rarely produces seeds in this country, and must, therefore, be propagated by paring the roots. In some parts of the United States



it is extensively cultivated, and turned to a very valuable account in a variety of ways. One acre of ground will produce from forty to fifty bushels of seed—sometimes much more. Good seed will produce a gallon of oil to the bushel, and the oil has been sold at a dollar

of superfluity. Those to whom suppers are the most injurious are the plethoric, or such as suffer from head symptoms. Some persons, however, especially dyspeptic invalids, do themselves harm by abstaining from suppers of every kind, even after the principal meal has been taken early in the day. This abstinence is adopted under an erroneous impression that all suppers are bad, and the consequence is that the stomach suffers from uneasy sensations during the night, and a sense of exhaustion ensues in the morning, both of which may be prevented by a moderate supper of light food, such as is generally found to agree the best; thus many a dyspeptic subject will find his morning meal better digested after a light supper, than without one.

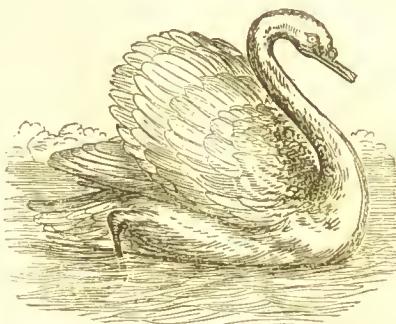
SUPPERS. TO PREPARE.—The ingenuity of a housewife is often taxed to contrive a satisfactory supper, especially if it be demanded upon an emergency. Economy, good taste, and neatness can, however, do much, where the chief organ to be propitiated is the eye; for the lateness of modern dinner-hours has now almost universally changed suppers from a solid meal into a light showy refreshment. Thus, the gratification afforded by the supper mainly depends upon the beautiful shapes and arrangements of china, glass, linen fruits, foliage, flowers, colours, lights, or ornamental confectionery, and all the other natural and artificial embellishments of the table. When a formal substantial supper is set out, the principal dishes are understood to be roasted game and poultry, meats, sliced ham, tongue, collared and potted things, grated beef, Bologna sausage, highly-seasoned cold pies of game, &c., with occasionally soup — an addition to modern suppers which, after the heat and fatigue of a ball-room or large party, is found particularly grateful and restorative. Minced white meats, lobsters, oysters, collared eels, and craw-fish dressed in various forms; sago, rice, the more delicate vegetables, poached eggs, scalloped potatoes, are all suitable articles of the solid kid. To these are added ices, cakes, tarts, possets, creams, jellies in glasses or shapes, custards, preserved or dried fruits, pancakes, fritters, puffs, tartlets, grated cheese, butter in little shapes, and sandwiches; and for convivial suppers, the entire catalogue of the more stimulating dishes, as anchovy toasts, grilled bones, toasted cheese, roasted onions, salmagundi, slices of smoked sausages, &c. A supper table should neither be too much crowded, nor too much scattered and broken with minute dishes. Any larder moderately stored will furnish a few substantial articles for supper on an emergency; and a few sweet things, readily prepared or purchased, with patties, shell-fish, and fruits, will make up the rest, if the effect of contrasted colours, flavours, and forms be understood, and that light and graceful disposition of trifles which is the chief art in setting off such entertainments.

SUSSEX CAKES.—To two pounds of well-dried flour mix three-quarters of a pound of powdered loaf-sugar, four ounces of sweet, and one of bitter almonds, pounded

in a little orange-flower water, and a pound of fresh butter beaten to a cream; mix these well together; bake in small tins well floured, or drop on floured tins.

Flour, 2lbs.; sugar, $\frac{3}{4}$ lb.; sweet almonds, 4ozs.; bitter almonds, 1oz.; orange-flower water, sufficient; butter, 1lb.

SWANS, TO BREED AND REAR.—Tame swans are never kept except there be a piece of water for them to swim in, to which they are a great ornament; and it is necessary that the water should be clear, towards keeping it in which condition they assist. Its food is very similar to that of the



goose. The swan lays early in the spring only once a year, and has seldom more than three eggs. The male assists in hatching. They require little attention in breeding, except the appropriation of a small house for their young, for they usually build their nests in some secluded spot near the water, and prefer an island, if there is one. The cygnets are dark-coloured when first hatched, and do not become white till their second year. Their bringing up is left to the mother, and they may or may not have food supplied, according to the locality.

SWAN'S DOWN, TO CLEAN.—White swan's down may be washed in soap and water; after washing, shake it out, and when the down is somewhat raised, dry it before a clear fire.

SWAN'S EGGS BOILED.—Take as much water as will cover the egg or eggs well in every part; let it boil quickly, then take it from the fire, and as soon as the water ceases to move, put in the eggs, and leave it by the side of the fire, without allowing it to boil, for twenty minutes, and turn it gently once or twice in the time; then put on the cover of the stewpan, and boil it gently for a quarter of an hour; take it quite from the fire, and in five minutes put into a basin, and throw a cloth once or twice folded over it, and let it cool slowly. It will retain the heat for a very long time, and as it should be quite cold before it is cut, it should be boiled early if wanted to serve the same day. Halve it evenly with a sharp knife lengthwise, take out the yolk with care, and prepare it for table.

SWAN'S EGGS FORCED.—Boil gently for twenty minutes in plenty of water, that they may be entirely covered with it, five or six fresh swan's eggs, and when they are done, lift them into a large pan of water to

cool. By changing the water once or twice they will become cold more rapidly, and they must not be used until they are perfectly so. Roll them in a cloth, pressing lightly on them to break the shells; clear them off, and halve the eggs evenly lengthwise. Take out the yolks with care, and pound them to a smooth paste in a mortar, with an ounce and a half, or two ounces at the utmost, of pure-flavoured butter to the half dozen, a small half-teaspoonful of salt, a little finely grated nutmeg, and some cayenne, also, in fine powder, a little mace. Blend these ingredients thoroughly, and add to them by degrees one raw hen's egg slightly whisked, and the yolk of a second, or a dessertspoonful or two of sweet rich cream. One common egg is sufficient for four of the swan's egg yolks. Beat up the mass, which will now be of the consistency of a thick batter, well and lightly, and proceed to fill the whites with it, having first cut a small slice from each half to make it stand evenly on the dish, and hollowed the inside with the point of a sharp knife, so as to render it of equal thickness throughout. Fill them full and high, smooth the yolks gently with the blade of a knife, arrange the eggs on a dish, and place them in a gentle oven for a quarter of an hour. Serve them directly they are taken in.

SWEET BISCUITS.—One pound of flour, half a pound of butter, the same quantity of finely-pounded sugar, and two eggs, without being beaten; make it all into a very stiff paste with cold water; roll it out, and to form the biscuits roll a bit of the paste into a ball about the size of the yolk of an egg, flatten it a little, and place them upon tins to bake.

Eggs, 2; flour, 1lb.; butter, $\frac{1}{2}$ lb.; sugar, $\frac{1}{2}$ lb.

SWEETBREAD CROQUETS.—Minee some cold sweetbreads, which have been dressed, and boil them in a sauce velouté; when quite cold form them into balls or into rolls about two inches long; fry and serve them with fried parsley in the middle. Or make the croquet meat into a rissole. Roll out a piece of thin puff-paste, enclose the meat in it, brush it over with a beaten egg, and strew over it grated bread; fry it of a light brown colour.

SWEETBREAD CUTLETS.—Boil the sweetbreads for half an hour in water or veal broth, and when they are perfectly cold, cut them into slices of equal thickness, brush them with yolk of egg, and dip them into very fine bread-crumbs seasoned with salt, cayenne, grated lemon-rind, and mace, fry them in butter of a fine light brown, arrange them in a dish, placing them high in the centre, and pour under them a gravy made in the pan, thickened with mushroom powder and flavoured with lemon-juice, or sauce them with some rich brown gravy, to which a glass of sherry or Madeira has been added. When it can be done conveniently, take as many slices of a cold boiled tongue as there are sweetbread outlets, pare the rind from them, trim them into good shape, and dress them with the sweetbreads after they have been egged and seasoned in

the same way, and place each cutlet upon a slice of tongue when they are dished. For variety, substitute fried bread stamped out to the size of the eullet with a round or fluted paste or cake cutter. The crumb of a stale loaf, very evenly sliced, is best for the purpose.

SWEETBREAD FRICASSEE.—Cut the sweetbreads in rather thick slices, boil them till half done in a little more water than will just cover them. Add a seasoning of salt, pepper, and mace. Then put to them some butter, the yolks of four eggs beaten, with a little white wine, and some lemon-juice. Keep this over the fire, shaking it well, till the sauce is properly thickened. Serve it up with the juice of an orange squeezed over it. If it is to be a brown fricassee, fry the sweetbreads first in butter till the outside is browned. Then pour off the butter, put water to the sweetbreads, and boil and finish them as before. An onion or a clove of garlic may be added to the water; or if broth be used instead of water, it will make the fricassee more savoury.

SWEETBREAD FRIED.—Cut sweetbreads into long slices, beat up the yolk of an egg, and rub it over them with a feather. Make a seasoning of pepper, salt, and grated bread; strew this over, and fry them in butter. Garuish with crisped parsley, and small thin slices of toasted bacon.

SWEETBREAD LARDED.—Scald them in several waters, to disgorge the blood, and let them whiten a quarter of an hour in boiling water. Lard them, put them in a stewpan, with the larded side uppermost; moisten with stock, and season them; stew them slowly. When the sauce is reduced, and the sweetbreads a nice colour, serve them on stewed sorrel, chicory, or with a tomato sauce, pouring first over them the sauce in which they were stewed.

SWEETBREAD RAGOÛT.—Cut the sweetbreads into pieces about sufficient for a mouthful, wash them thoroughly, and dry them in a cloth, brown them in fresh butter, and, pouring into the stewpan as much rich brown gravy as will just cover them, let them simmer gently, and add a seasoning of pepper, allspice, salt, and mushroom ketchup. Thicken the sauce, and dishing the sweetbreads very hot, pour the sauce over them through a sieve.

SWEETBREAD ROASTED.—Trim a fine and particularly fresh sweetbread; parboil it for five minutes, and throw it into a basin of cold water. Roast it plain, or beat up the yolk of an egg, and prepare some fine bread crumbs. When the sweetbread is cold, dry it thoroughly in a cloth; run a lark-spit or a skewer through it, and tie it on the ordinary spit; egg it with a paste-brush; powder it well with bread crumbs, and roast it.

SWEETBREAD, WITH HERBS.—Chop fine parsley, shallots, and mushrooms; mix with them a piece of butter and some white pepper. Put the sweetbread into a saucepan, with some strips of fat bacon at the bottom, add half a glass of white wine, the same quantity of stock, and let it stew

slowly; when they are well done, take them out, skim the sauce, and add a little coulis or stock if too much reduced, and pour it hot over the sweetbread when you serve.

SWEETBREAD, WITH MUSHROOMS.—Choose sweetbreads, large and white. Soak and blanch them in boiling water till they are firm. Cut them into pieces, and stew them in some good stock with mushroom sauce. Take them up. Boil down the sauce, and, when well reduced, thicken with a little beaten yolks of eggs, and season with a little blanched parsley, delicately minced, and a little lemon-juice.

SWEET CAKES.—To a pound and a half of well-dried flour add the same quantity of fresh butter, washed in orange-flower water, and half a pound of powdered and sifted loaf-sugar; mix the flour and sugar together, rub in the butter, and add the yolks of three eggs beaten with a little cream; make it into a stiff paste, roll it to the thickness of a five-shilling piece, cut it into shapes, and bake on a floured tin.

Flour, $1\frac{1}{2}$ lb.; **butter**, $1\frac{1}{2}$ lb.; **orange-flower water**, sufficient; **sugar**, $\frac{1}{2}$ lb.; **eggs**, 3 yolks; **cream**, sufficient.

SWEETMEAT FRITTERS.—Cut small, any sort of candied fruit, and heat it with a bit of fresh butter, some good milk, and a little grated lemon-peel; when quite hot, stir in enough of flour to make it into a stiff paste; take it off the fire, and work in eight or ten eggs, two at a time; when cold, form the fritters, and fry, and serve them with pounded loaf sugar strewed over them.

SWEETMEATS, DIRECTIONS FOR MAKING.—In preparing sugar for sweetmeats, let it be entirely dissolved before it is put on the fire. If it is dissolved in water, allow about half a pint of water to a pound of sugar. If the sugar is boiled before the fruit is added to it, it will be improved in clearness by passing it through a flannel bag. Skim off the brown scum all the time the sugar is boiling. If sweetmeats are boiled too long, they lose their flavour and become of a dark colour. If boiled too short a time, they will not keep well.

SWEET SAUCE.—Put a little melted butter and half a pint of water in a saucepan; let it boil; add a little flour, to thicken it, and an ounce of butter, a wineglassful of brandy or sherry, and sweeten to taste with loaf-sugar. Serve in a turceen or butter-boat.

SWEET WILLIAM.—The sweet-william is one of the most easily grown flowers of the borders; and it is only when desired to perpetuate a particular variety that any difficulty is created. The seed may be sown in March or April, and the bed kept very clear from weeds, until the plants are large enough to plant out, about nine inches apart, in good rich soil of almost any kind. When they bloom, we have only to observe if any of the plants are worth propagating. The shoots at the bottom of the plant may be torn down, and planted under hand-glasses, or they may be layered like carnations. But these, as in all other flower-seeds promiscuously obtained or purchased

in the ordinary way, rarely give very good varieties. It is better to procure a few choice plants and save our own seeds. Double sweet-williams are to be purchased, and they yield seed which will generally give a further choice of double kinds, and usually better than their originals. The flower requires great perseverance before it will be produced in a superior state. The edges are naturally serrated very much, and the colours of many descriptions are speckled and indistinct, but there are varieties with smooth edges, like petals, and of a good colour, extremely small; nevertheless, they are susceptible of much improvement. The side shoots are, when rooted, planted out in the same way as seedlings, whether they are larger or struck under glass, although the plant has been set down as a biennial. If we discover among our seedlings any one a better colour than usual, or a thicker or smoother petal, or singularly marked, or with any other point deserving notice, it should be propagated by the bottom shoots for itself, and the seed should be carefully sowed for the chance of more improved varieties; but we should invariably pull up and throw away everything that is common as soon as a single flower opens to show its character, because, if we allow a bad one to remain, it will, in all probability, spoil a good bed of the seed. There is no obstacle to the sweet-william becoming a very grand show-flower, there is nothing to limit the size or the brightness of the colour, and perhaps the perfection, which would be scarlet and black; and these have already been seen approaching very closely in ill-shaped varieties.

SWELLINGS.—Swellings are of two kinds; first, those which are the result of blows, falls, or bruises, in which the injured part, from the rupture of a small vessel beneath the cuticle, instantly puffs up; and secondly, a slowly increasing tumour, the result of inflammation, and attended with heat, redness, and pain, and after a time, with a sense of fluctuation; this is an abscess. There are other kinds of swellings, as of the glands, all having different names; but these belong to the order of tumours. The treatment, for the first-named description of swelling, consists in applying a piece of lint soaked in the extract of lead to the part, and continuing the application till the swelling subsides. For the second-named swellings, the first object is, if possible, to suppress the swelling, and promote absorption; for this purpose the annexed lotion is to be applied cold, on rags constantly wetted. Take of

Sugar of lead	$\frac{1}{2}$ oz.
Sal ammoniac	2 drachms.
Camphor water	20 ozs.
Vinegar	4 ozs.

Dissolve, and make a lotion. When, in spite of the cold application, the swelling enlarges and the heat and throbbing increase, the lotion must be set aside, and hot poultices or fomentations substituted, till the abscess is fit to open.

SWIMMING.—The first thing is to conquer timidity. The whole success of swimming mainly depends upon confidence. Let it be understood that water is much more buoyant than the atmosphere, and that this quality tends to support the body, to raise it rather than to let it sink. Take a bladder filled with air, and try to thrust it into the water; the resistance will be very great. Within the body of every swimmer there is a similar air-distended vessel, which acts in the same manner under like circumstances; so that the first sensation experienced by a person going into the water is the tendency to re-appear upon its surface. Timid boys often walk into the water. The best way is to get an elder friend to take hold of you, with your full consent, of course, and dip you over head and ears. You will soon find out how easy it is to come up again. A sloping descent should be chosen, without holes or irregularities, so that you may choose your own depth. Dr. Franklin's advice upon this point is as follows:—"Choose a place where the water deepens gradually, walk coolly into it until you are up to your breast; then turn round your face to the shore, and let an egg be thrown into the water; the circumstance of the egg not being broken in its descent to the bottom, will prove to you what is asserted of the buoyancy of the water between the swimmer and the shore. The egg must lie in the water so deep that you cannot reach to take it up except by diving for it. To encourage yourself, in order to do this, reflect that your progress will be from deep to shallow water, and that at any time you may by bringing your legs under you and standing on the bottom, raise your head far above the water; then plunge under it with your eyes wide open. They must be kept open before going under, as you cannot open the eyelids afterwards, from the weight of water above you. Now turn yourself towards the egg, and endeavour by the action of your hands and feet against the water to get forward, till within reach of it. But in whatever way you (at first) enter the water, it is advisable to wet the head and neck either previously or immediately afterwards. This is for the purpose of equalizing the temperature of the body. A common method with beginners is to walk or run boldly in, and when in to plunge the head and neck beneath the water. But let not the tyro be ashamed, though he may be seen at first timidly to dip one toe in, and shiveringly withdraw it." We advise young practitioners, when they cannot obtain the personal assistance of some friend proficient in the art, to procure a set of cork floats, which may be easily made. Any cork-cutter will supply you with material enough for less than a shilling. Six or eight cylindrical pieces are strung together with a piece of rope, or a thong of leather; the length of this rope or thong may be regulated by your fancy or taste. Their use need scarcely be pointed out; passing under the armpits, the young bather lies upon them, and throwing up his legs, begins his familiarities

with the limpid element. As a support to the head and shoulders, they are undoubtedly efficient, but, of course, they interfere with the progress forward, and it is therefore best, as soon as the slightest confidence in the water has been obtained, to discard the corks altogether. It has been objected to their use that they induce a lazy reliance upon an artificial aid, and obviate the necessary exertion which, while it would support the body without them, would be very beneficial to the limbs; but a more valid objection is, that they sometimes get shifted out of their place, and tend to send the legs upwards instead of the head. In the swimmer's first attempt, his head should be a little thrown back, his chest gently pressed on the water, resting, as it were, his chin upon its surface; his hands joined palm to palm, or thumb to thumb, either will do, the fingers and thumb of each hand brought close together, like the webbed feet of ducks; let him spring forward from the ground, at the same time throwing out his arms before him to their greatest reach; the legs at the same moment should make a motion corresponding to that of the arms. *Fig. 1* shows the kind of attitude the



Fig. 1.

body should assume at the commencement of the stroke. After the spring forward, the hands should turn, with the palms outwards, the fingers and thumbs close together, and the latter downwards; scoop the water, and describe an arc of ninety, of which the shoulders form the centre. In bringing them to the first position, they are swept to the sides as low as, but at some distance from, the hips; the arms are brought close to the sides, the elbows held upwards, and the wrists downwards, so as to let the hands hang momentarily down. This will suffice to send the body forward, and it will only be necessary to repeat the action in order to continue its progression. Do not let the hands or feet cut the surface of the water; keep them beneath it, the feet about a foot or a foot and a half, and the hands a few inches. It is with swimming as with most other things, whether arts or sports, the best practitioners make

the least splash. There is a difference between *diving* and *plunging*. The former is for deep water, the latter is for shallow streams, and gradual descents. *Fig. 2*



Fig. 2.

exhibits the proper attitude for diving. In this case the head is brought down towards the chest; the arms stretched forward as in an intensely supplicating position, the hands forming a point; the legs and thighs make an angle of ninety degrees, and the knees touch the shoulders. The plunge must then be made fearlessly; but care must be taken that a somersault is not the consequence. When the diver has gone as deep as he intends, or wishes, he may, by raising and depressing the arms, rise to the surface. This practice is, of course, only fit for experienced swimmers. In the *shallow water plunge*, *fig. 3*, the

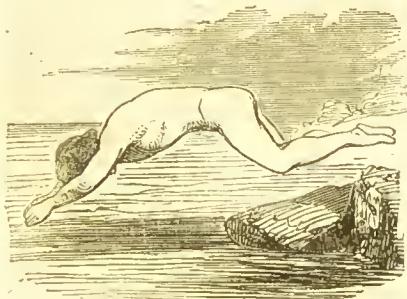


Fig. 3.

learner must throw his body as far forward into the stream as he is able. When he reaches the water he must raise his head, straighten his back, and take the first position described above; see *fig. 1*. But there is a good method of going into the water, called the feet foremost plunge, which should be practised, as it may often happen that that method of jumping into a stream may be the most desirable, as, for instance, in attempting the rescue of a playmate. The young swimmer, therefore, should endeavour to become accustomed to it. In this case, the legs, arms, and head are to be kept perfectly stiff and immovable, and in no case

to throw the limbs into any other attitude. It will very soon be found that nothing can prevent the diver returning to the surface almost immediately. In *hand over hand swimming*, the body appears to be gracefully running; see *fig. 4*. The right hand is raised from the water behind, describes an arc in the air to the extent of its capacity, and re-enters the water edgewise; immediately it is turned palm downwards, and continuing the circle beneath the water, acts like a paddle in propelling the body; simultaneously the body is turned upon the right side, and the right leg kicked backwards to its full extent. When the right hand has reached a point near the thigh, which it evades by a slight turn, the swimmer commences to turn on his left side; the left hand and body then do what the right hand and foot have done, and so hand over hand swimming is accomplished. *Swimming on the side* is often adopted as a relief

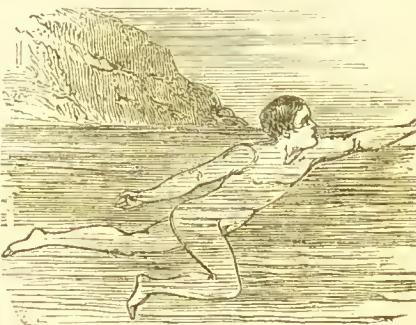


Fig. 4.

to the swimmer, when fatigued with the ordinary swimming motion. To do this, elevate the left shoulder, thrust forward the right arm along the surface, and with the palm hollowed, scoop the water towards the chest, raising the left and right hand alternately with the thumbs downwards, in the manner of an oar. The feet are struck out in the usual way. *Balancing*.—Let the head fall gently back till the chin is just upon a level with the surface, and the whole back of the head immersed. The arms, and even the legs, may be crossed (see *fig. 5*), and the swimmer is "balancing." To perform this feat, coolness is required: the water should be smooth and unruffled by any cause, as any wave, however trifling, may send the water into the nose and eyes of the performer, and disturb his balancing; since all feats of floating are dependent upon the natural truth that the air within the cavity of the chest, is sufficient, rightly managed, to support the body in the water. If the balancer stretches out his arms at their full length, and brings them in a line behind his head, his legs and feet will rise to the surface of the water—his toes will appear above it, and he will lie like a plank upon the water for any length of time he pleases. This is the result of the

fact that the lungs have now become the centre of the body, the head and arms at one end balancing the legs and feet at the other. *To swim on the back, feet first.*—Proceed as described at the commencement



Fig. 5.

of the directions for *balancing*, allowing the head to fall gently backwards; press the hands downwards and backwards, with the palms slightly hollowed. The feet will immediately rise to the surface, when the hands may be used to press the water exactly as oars: propel the body forward by successive strokes, the hands being raised edgewise, and passed gently along the sides till they descend for another stroke. *To swim on the back, head first.*—This is to be done in several ways. Method the first: Throw your head gently back, as seen in fig. 6, bringing your feet to the surface; let your arms lie close down by your sides, moving your hands in the same manner as when sculling, with a quick thrusting

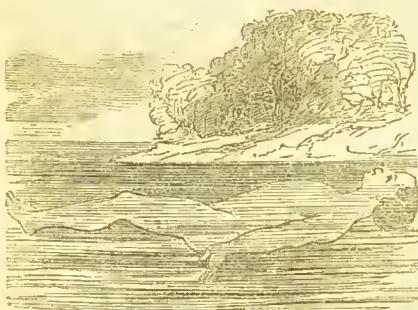


Fig. 6.

motion towards the feet, returning edgewise, thumbs first, by bending the arms, and

pushing again towards the feet, by straightening the arms close to the sides. By this plan a very quick progress through the water may be effected, and it may be continued for a long time. Method the second: Throw yourself round on your back, without stopping (we will suppose that you are swimming in the manner first described), and you will retain some of the impetus already acquired. Then let both arms and hands describe segments of circles in a backward direction, like the paddle-wheels of a steamer; or you may vary this, but letting the arms circulate alternately, as in the hand over hand swimming. Method the third: Both hands and arms are used, as in the last method, but in addition, the feet and legs are used in a thrusting action. The motion with the legs takes place while the hands are in the air. *Treading water.*—To do this, allow your feet to descend perpendicularly on the water, and by an action similar to that of stepping up a ladder, you will be able to keep your head and neck above the surface. The hands may be made to assist materially by a kind of pawing motion, the back upwards in the downward stroke. In regaining their position they turn sideways. By the union of the powers of the hands and feet, treading water may be continued for a length of time. By inclining the body to the left or right, you may advance in any direction you choose although the progress will be but slow. There are a variety of feats to be performed in the water which, when you have conquered your first timidity, you may easily do: such as trimming the toe-nails, holding one leg out—which may be best learned from the observation of other and older swimmers.

SWISS CREAM.—Flavour with lemon-peel one pint of cream (leaving out a little to mix with two teaspoonsfuls of fine dried flour to a smooth batter); add six ounces of lump sugar; put the cream and sugar into a saucepan, and, when boiling, add by degrees the flour; simmer four or five minutes, stirring all the time; pour it out, and, when cold, mix with it by degrees the juice of two lemons. Take a quarter of a pound of macaroons, put part of them in a dish, and pour over them a glass of white wine, then part of the cream, then macaroons and cream again; ornament with sliced citron. It should be made some hours before wanted.

SWISS PUDDING.—Butter a pie-dish, and put into it a layer of bread crumbs, then a layer of sliced apples, sprinkle over moist sugar, then a layer of bread crumbs, next of apples and sugar, and so on till the dish is filled, finishing with a thick layer of crumbs; melt fresh butter and pour over it. Grate in a little nutmeg, and bake an hour.

SWOONING.—A gradual fainting away, with a complete or partial loss of consciousness.—See FAINTING.

SYLLABUB, LEMON.—To a pint of cream put a pound of refined sugar, the juice of seven lemons, grate the rinds of two lemons into a pint of white wine and half a pint of canary; then put the whole into a deep pot,

and whisk it for half an hour. Put it in glasses the night before it is wanted. It is better for standing two or three days; but it will keep week if required.

Cream. 1 pint; sugar, 1lb.; lemons, juice of 7, rinds of 2; white wine, 1 pint; canary wine, $\frac{1}{2}$ pint.

SYLLABUB, SOMERSETSHIRE.—Put into a large bowl a pint of port wine and a pint of sherry; sweeten to taste. Then fill the bowl up with milk, and, after letting it stand for twenty minutes, cover it well with clouted cream; grate nutmeg over all, add pounded cinnamon, and strew thickly with nonpareil comfits.

C Port wine, 1 pint; sherry, 1 pint; sugar to sweeten; milk and clouted cream, sufficient; nutmeg or cinnamon, to flavour.

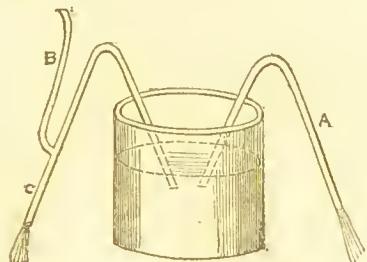
SYLLABUB, STAFFORDSHIRE.—Put a pint of cider into a bowl, with a wineglassful of brandy, some sugar and nutmeg. Pour a quart of new warm milk into it from a jug held up high, and moved in a circular direction. Grate nutmeg on the top, or strew with nonpareil comfits.

Cider, 1 pint; brandy, 1 wineglassful; sugar, to sweeten; nutmeg, to flavour; milk, 1 quart.

SYLLABUB, WHIPPED.—Make a strong whip, as for trifle. Mix a pint of cream with half a pint of sweet wine, sugar to taste, and flavour with the juice and grated peel of a lemon and a little cinnamon. Stir this briskly, and fill the glasses within half an inch of the brim. With a spoon, lay a little of the whip lightly on the top of each.

C Whip, as for trifle; cream, 1 pint; sweet wine, $\frac{1}{2}$ pint; sugar, to sweeten; lemon-juice, rind, and cinnamon, to flavour.

SYPHON.—This implement is frequently found convenient for transferring beer or other liquor from one vessel to another, as by its aid the liquor may be decanted without disturbing the sediment; and, also, the liquor can be thus transferred without making any aperture in the lower part of the vessel. For ordinary purposes, such a syphon as that seen in the engraving will



do. To use it, the short end must be placed in the liquor to be decanted, and by sucking with the mouth or other method, through the other end, it must be raised in the tube so as to run out; and it will then continue to run of itself until the vessel is emptied. But, as sucking by the mouth is on many accounts inconvenient, the same effect may be produced by inverting the syphon, and filling it with the liquor; then keeping the

two ends stopped with the finger, or otherwise, introduce the short end into the liquor, unstop the ends of the syphon, and the liquor will flow. In the syphon it is essential that the leg through which the liquor flows shall be longer than the other, as the whole action depends upon this; for it is the greater weight of the fluid in the longer leg that overbalances that of the shorter leg. Small glass syphons are sold of both forms A and B, and are found extremely useful for decanting many liquids, where it is desirable to draw the fluid from the top instead of the bottom, and where any disturbance would be injurious.

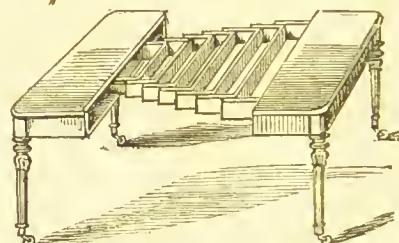
SYRUP.—A saturated, or nearly saturated, solution of sugar in water, either simple, flavoured, or medicated. In the preparation of syrups, care should be taken to employ the best refined sugar, and either distilled water or filtered rain water; by which they will be rendered much less liable to spontaneous decomposition, and will be perfectly transparent without the trouble of clarification. When inferior sugar is employed, clarification is always necessary. This is best done by dissolving the sugar in the water, or other aqueous dissolvent, in the cold, and then beating up a little of the cold syrup with some white of egg, and an ounce or two of cold water, until the mixture froths well. This must be added to the syrup in the boiler, and the whole whisked up to a good froth. Heat should now be applied, and the scum which forms removed from time to time with a clean skimmer. As soon as the syrup begins to slightly simmer, it must be removed from the fire, and allowed to stand until it has cooled a little, when it should be again skimmed, if necessary, and then passed through clean flannel. When vegetable infusions or solutions enter into the composition of syrups, they should be rendered perfectly transparent by filtration or clarification before being added to the sugar. The proper quantity of sugar for syrups will, in general, be found to be two pounds to every imperial pint of water or thin aqueous fluid. These proportions, allowing for the water that is lost by evaporation during the process, are those best calculated to produce a syrup of the proper consistence, and possessing good keeping qualities. In the preparation of syrups, it is of the greatest importance to employ as little heat as possible, as a solution of sugar, even when kept at the temperature of boiling water, undergoes slow decomposition. A good plan is to pour the water, cold, over the sugar, and to allow the two to remain together for a few hours, in a covered vessel, occasionally stirring, and then to apply a gentle heat (preferably that of steam or a water-bath) to finish the solution. It is erroneously thought by some persons that a syrup cannot be properly prepared unless it is well boiled; but if this method be adopted, the ebullition should only be of the gentlest kind, and should be checked after the lapse of one or two minutes. When it is necessary to thicken a syrup by boiling, a few fragments of glass should be intro-

duced, in order to lower the boiling point. To make highly transparent syrups, the sugar should be in a single lump, and by preference taken from the bottom or broad end of the loaf; as, when taken from the end, or if it be powdered or bruised, the syrup will be more or less cloudy. Syrups are judged to be sufficiently boiled when some taken up in a spoon pours out like oil; or, a drop cooled on the thumb-nail, gives a proper thread when touched. When a thin skin appears on blowing the syrup, it is judged to be completely saturated. The practice of completely saturating the water with sugar is a bad one. Under ordinary circumstances, a syrup with a very slight excess of water keeps better than one fully saturated. In the latter case, a portion of sugar generally crystallizes out on standing, and thus, by extracting sugar from the remainder of the syrup, so weakens it, that it rapidly ferments and spoils. This change proceeds at a rapidity proportionate to the temperature. Saturated syrup, kept in a vessel that is frequently uncorked or exposed to the air, soon loses sufficient water, by evaporation from its surface, to cause the formation of minute crystals of sugar, which, falling to the bottom of the vessel, continue to increase in size at the expense of the sugar in the solution. On the other hand, syrups containing too much water also rapidly ferment, and become acscent; but of the two, this is the lesser evil, and may be more easily prevented. The preservation of syrups is best promoted by keeping them in a moderately cool, but not very cold place. They are better kept in small rather than in large bottles, as the longer a bottle lasts the more frequently it will be opened, and, consequently, the more it will be exposed to the air. By bottling syrups while boiling hot, and immediately corking down and tying the bottles over with bladder, perfectly air-tight, they may be preserved, even at a summer heat, for years without fermenting or losing their transparency. The crystallization of syrup, unless it be over-saturated with sugar, may be prevented by the addition of a little acetic or citric acid. The fermentation of syrups may be effectually prevented by the addition of a little sulphite of potassa or of lime. Fermenting syrups may be immediately restored by exposing the vessel containing them to the temperature of boiling water. In making the above additions to syrup, care must be had not to mix incompatible substances. Thus, in general, the two methods referred to cannot be practised together.

T.

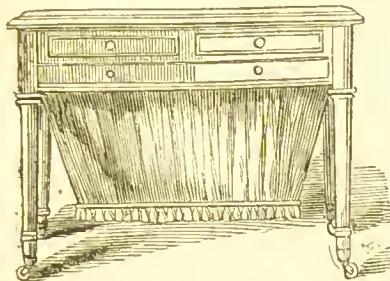
TABLE.—A well-known article of household furniture, made in a variety of forms, according to the use to which it is to be put. Dining-tables are necessarily of various sizes

and shapes, to suit the apartments, number of guests, and other circumstances. Numerous methods have been contrived for increasing the size of tables on occasion, and of causing them to occupy less space when out of use. One of the most usual is the common dining-table made of mahogany, with a fixed centre part, and folding leaves or flaps, supported by fly-rails and legs to draw out or put back when the table is placed at the side of the apartment. These tables may be square or round. One kind of them, called a cottage dining-table, has the fixed centre not above eighteen inches wide, to take up as little room as possible when put away. A square table may be increased to an oblong one by having fly-brackets on which may be laid loose flaps. These flaps are fixed in their places by pegs that drop into holes in the brackets; and they may be strengthened by projecting iron straps let into the table below the top. A thin rail may be put on, with hinges to fold down, and conceal the flaps when the table is to be square. When a very long dining-table is required, the usual method is to have the table that generally stands in the centre of the dining-room, whether square or round, so contrived that it separates



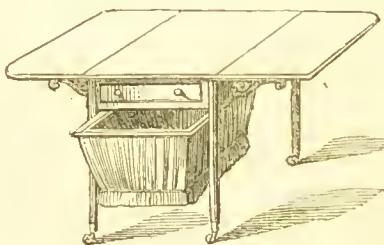
in two as in the annexed figure, and having loose flaps placed between, supported by slides called lopers, that draw, forming a series of joists, the whole still resting only upon four legs of the original table; this method is extremely convenient, as it prevents any more legs coming in the way of the guests. In this manner a table may be made nine feet long, and without requiring any additional support; and one advantage of this construction is that it obviates the inconvenience which frequently arises when the feet are numerous, and the floor not perfectly level. The flaps, when not used, are kept in cases made on purpose, and placed in an adjoining room, or a receptacle may be contrived for them in a sideboard. It is essential that the case in which they are kept should have openings to admit a free circulation of air, otherwise the flaps are apt to warp or decay; and slips, lined with green baize, should be fixed on the case, to prevent the flaps rubbing against each other, or being stretched on taking out or putting in. *Pembroke tables* are well-known convenient furniture, frequently used as small breakfast or dining-tables; it is requisite that they should be made of well-seasoned mahogany, otherwise, from the lightness of their structure, they soon

become rickety; on this account frequently they can be most depended upon after they have been used for some time. *Dressing tables* are most useful pieces of bedroom furniture. The one shown in the engraving



is especially so. It is provided with two upper drawers, and a frame resembling a drawer externally, of the length of the table beneath. To this frame a bag of fluted silk is attached, tapering downwards, and reaching within six inches of the floor, leaving just enough of space to allow room for the feet and knees when the lady is sitting before the table. This bag pulls out like a drawer, and has a wooden bottom, to which may be fixed stands, on which to place bonnets; and hooks may be attached to the inside of the wooden frame from which the silk bag hangs, on which to place caps. *Pier tables* are those which are placed against the piers between the windows; the tops are generally formed of some precious marble or scagliola. When a slab of the pier table is supported by what is termed in architecture a *console*, it is called a console table. Pier tables are likewise supported by short columns or grotesques, and sometimes they contain cabinets or bookshelves. Frequently, ornamental vases or other objects of vertu are placed upon them. If there are mirrors in the apartment, they are best placed over the pier tables, because the light from the windows coming full on the face is reflected in the mirror. *Card tables* were formerly made with the top to fold, one half of which was supported by two of the legs, which were made to turn out. They are now made upon an improved construction, by which they can likewise have the top to fold, but may stand upon a single pillar. The folding top is made to revolve upon the frame, until it comes at right angles to its former position, when it exposes a well in the frame, in which the cards, &c., are kept; and it is then opened, being supported by the frame, which it entirely covers. These card-tables are, therefore, capable of every kind of embellishment as well as any occasional tables, and there is nothing in their appearance to distinguish them particularly from other tables. *Library tables* require to be made very firm and solid. The top is usually covered with leather for writing on, and they are furnished with large convenient drawers for holding portfolios, &c. A table

of this kind, termed the pedestal library table, is one of the most convenient. The table itself rests upon a nest of drawers placed at either end, and leaving a space in the centre to admit of the legs. Part of the top may be made to lift up as a desk to write on, and a shallow drawer may pull out in the right to hold ink, pens, &c.; and also a shelf may be made to draw out on the left, to increase the size of the top on occasions. It would be a convenient addition, though not usual, to have a cover hinged to the back, so as to shut over the top entirely, for the purpose of securing everything on it occasionally with a lock, without disturbing or putting them away, and this cover, when laid back, would be useful to give more room for holding papers. This table might likewise be made with doors to cover all the drawers, in which case one lock and key would serve the whole, or one side might be fitted up for portfolios, or large books, maps, &c. *Ladies work-tables* are small tables for holding the lighter articles of their work, and are generally fitted up with convenient places for cottons, needles, pins, scissors, &c. They are sometimes plain, of mahogany, with small drawers, or with a



silk bag fluted with a fringe, as in the annexed figure. A work-table may also be combined with one for writing or drawing, and to contain, besides the usual bag, a desk, to raise up, for reading, with convenient places for writing or drawing materials, with a sliding shelf at the side.

TABLE-COVERS, TO WASII.—A bright windy day is best for this purpose. Having first taken out all the grease spots and stains, put the table-cover into a tub with clean suds of white soap and clear water, warm, but not too hot (in which have been mixed about two tablespoonfuls of ox-gall), and wash and squeeze it well. Then wash it through a second lather, somewhat weaker, of soap, but without any gall in it. Afterwards rinse it through light lukewarm suds, just tinged with soap. Instead of wringing (which will shrivel it) press out as much of the water as you can with your hands, then fold it up in a tight long fold, and roll and press it hard with both hands on a clean ironing-table, having set a tub to catch the water that drips from it during the process. Roll it always from you, towards the end of the table. When the water ceases to come from it, shake and stretch it well, and dry it as soon as possible; but not by the fire. Go to it

frequently while drying, and stretch and shake it. While it is yet damp, take it in, spread it on an ironing-sheet, and iron it on the wrong side, pressing it hard.

TABLE, LAYING OUT OF.—The laying out of the table for the various repasts of the day, is as follows: *For breakfast*, a white cloth is spread over the table, and as many cups and saucers of a large size are arranged upon it as there are persons to partake of the meal. For greater convenience, the lady who presides at the breakfast-table sometimes prefers having all the cups and saucers placed at her left hand. There must also be placed the tea-pot or coffee-pot, or both, as may be required; a milk-jug, with hot milk in it for the coffee, and another with cold milk for the tea; a slop-basin, spoons, sugar-basin and tongs, small plates and knives and forks, egg-cups and egg-spoons, saltcellars, mustard-pot, &c. A clean bright kettle, filled with boiling water, must be set on the hob. An uncut loaf on a plate, with a knife; a butter-dish and knife. If cold meat be taken for breakfast, it should be placed at the end or side of the table opposite the presiding lady, and with it a carving-knife and fork. If an urn is used, it must be placed behind the teapot on a rug or mat. *For dinner*.—The first thing is to see that the saltcellars and castors are properly supplied. Then wipe the bread-basket, waiters, spoons, and sauce-ladies, and arrange everything required upon the dinner-tray, so that it may be readily carried into the dining-room. About half an hour before dinner-time, the table should be dusted, and the cloth neatly spread over it, taking care that the centre pattern of the cloth, if it have one, be exactly in the middle of the table. The tray should then be taken to the dining-room, and set in a convenient corner for transferring the things from it to the table. In placing the various articles, first put a salt-cellar at each corner of the table, if there are four; if only two, one at one corner of the table at the top, and the other at the corresponding corner at the bottom; laying either one or two tablespoons by the side of each. Then place a carving-knife and fork, and a gravy spoon, and a plain knife and fork inside of the carvers at the top of the table, and the same at the bottom; the handle of the gravy spoon to the right hand, and the bowl to the left. At the top of the table, lay the fish slice in the same manner, and at the bottom the soup-ladle; then place a knife and fork, a dessert-spoon, a tumbler, a wine-glass, and a piece of bread, for each person who is about to dine. The bread should be laid at the left hand of each guest, that it may not interfere with the glasses, which are on the right. A water-decanter should be placed at each corner of the table, if there are four; if only two, one at each of the two remote corners, or one in the middle at each side of the table. If water-decanters are not used, fill a jug with spring water, and set it on the side-board ready to fill the tumblers, as the company may require. If the dishes are not too numerous, they should be conveyed to

the dining-room on a tray; but if the tray will not contain them, they may be taken up separately. *For tea*.—Place the teapot nearly in the centre of the tray in front of the lady who makes tea; the sugar-basin, milk-jug, and slop-basin, behind the teapot; and around, cups, saucers and teaspoons, one for each person. A small plate should be also laid for each person; the toast, if any, under a cover; cake, if usually taken; and a small cottage loaf, with a butter-dish and a knife; or, if preferred, a plate of nicely-cut thin bread and butter. *For supper*.—When there is no one to provide for but the family, it is usual to employ a tray with open hinges. Over this a cloth is laid, and the things required placed on it, as upon a table. When the tray is loaded, the ends and sides of the cloth must be turned down smoothly, and the sides of the tray fastened up. When the tray reaches the table, the sides of the tray are let down, the provisions uncovered, and the cloth spread around. On a waiter, or small tray, may be placed the malt liquor and water, and the requisite number of tumblers. If there is a supper-party, the cloth is laid upon the table nearly the same as for dinner; but a plate is put for each person, with a piece of bread on the left hand, and a tumbler and wine-glass on the right; and at each of the two remote corners of the table a small plate is set, with a slice of butter about an inch in thickness; the meat, poultry, &c., is garnished with sprigs of parsley, and laid on the table the same as for dinner.

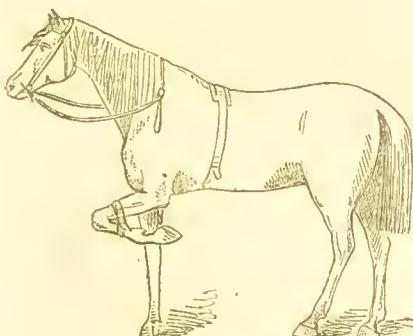
TAMARIND DRINK.—Boil three pints of water with an ounce and a half of tamarinds, three ounces of currants, and two ounces of stoned raisins, till about a third has evaporated. Strain; add a bit of lemon-peel, which is to be removed in half an hour, then cool.

TAMARINDS.—Of the two species of the genus *tamarindus*, the fruit is much larger in the East Indian than the West Indian. The shell being removed, there remains the flat, square, hard seed embedded in a pulp, with membranous fibres running through it. In the East Indies the pulp is either dried in the sun and used for home consumption, or, with salt added, it is dried in copper ovens. This kind is sent to Europe. The sort called natural tamarinds, is much darker and drier than the West Indian, which are called prepared tamarinds. The West Indian tamarinds reach maturity in June, July, and August, when they are collected, and the shell being removed, they are put into jars, either with layers of sugar put between them, or boiling syrup poured over them, which penetrates to the bottom. Prepared tamarinds, therefore, contain much more saccharine matter than the others.

TAMING OF HORSES.—This subject has been partially treated of under the head of *HORSE-TAMING*, but at the period when that article was written, the precise method pursued by Mr. Rarey (the universally acknowledged Horse Tamer) had not yet been made public. It will scarcely be out

of place, therefore, to present a brief abstract of the various modes certainly adopted by Mr. Rarey, in bringing about the wonderful results which have attended his efforts in this direction. Rarey's theory is founded on the following three fundamental principles. First, that the horse is so constituted by nature that he will not offer resistance to any demand made upon him which he fully comprehends, if made in a way consistent with the laws of his nature. Second, that he has no consciousness of his strength beyond his experience, and can be handled according to our will without force. Third, that we can, in compliance with the laws of his nature by which he examines all things new to him, take any object, however frightful, around, over, or on him, that does not inflict pain, without causing him to fear.

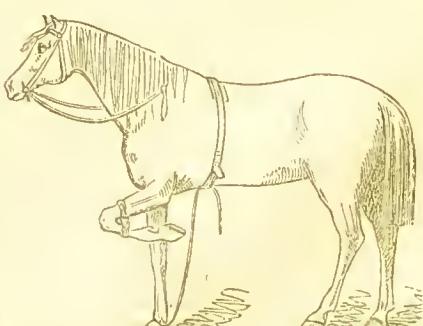
To drive a horse that is very wild and has any vicious habits.—Take up one fore-foot and bend his knee till his hoof is bottom upwards, and nearly touching the body; then slip a loop over his knee, and up until it comes above the pastern-joint, to keep it up, being careful to draw the loop together between the hoof and pastern-joint, with a second strap of some kind to prevent the loop from slipping down and coming off. This will leave the horse standing on three legs; you can now handle him as you wish, for it is utterly impossible for him to kick in this



position. There is something in this operation of taking up one foot that conquers a horse quicker and more surely than anything else you can do to him—the chief reason being, that by conquering one member you conquer, to a great extent, the whole horse. When the horse's foot is first tied up, he will sometimes become very wild, and strike with his knee, and try every possible way to get it down, but he cannot do that, and will soon give up. This will conquer him better than anything you could do, and without any possible danger of hurting himself or the operator either, for you can tie up his foot and sit down and look at him till he tires. When you find that he is conquered, go to him, let down his foot, rub his leg with your hand, caress him, and let him rest a little; then put it up again. Repeat this a few times, always putting up the same foot, and he will soon learn to

travel on three legs, so that you can drive him some distance. As soon as he gets a little used to this way of travelling, put on your harness, and hitch him to a sulky. You need not be fearful of his doing any damage while he has one foot up, for he cannot kick, neither can he run fast enough to do any harm. If he wants to run, you can let him have the lines and the whip too, with perfect safety, for he can go but a slow gait on three legs, and will soon be tired and willing to stop; only hold him enough to guide him in the right direction, and he will soon be tired, and willing to stop at the word. Thus you will effectually cure him at once of any further notion of running off. Generally speaking, horses kick because they are afraid of what is behind them, and when they kick against it and it hurts them, they will only kick the harder; and this will hurt them still more, and cause them to remember the circumstance much longer, and also make it still more difficult to persuade them to have any confidence in anything dragging behind them again. But by the method suggested above, horses may be harnessed to a rattling sulky, plough, waggon, or anything else in its worst shape. The horses may be frightened at first, but they cannot kick or do anything to hurt themselves, and will soon find that you do not intend to hurt them, and then they will not care any more about it. You can then let down the leg and drive along gently without any further trouble. By this process, a horse, if he kick ever so badly, may be taught to go gently in harness in a few hours' time.

To make a horse tie down: bend his left fore-leg and slip a loop over it, so that he cannot get it down. Then put a surcingle round his body, and fasten one end of a long strap around the other fore-leg, just above the hoof. Place the other end under the surcingle, so as to keep the strap in the right direction, take a short hold of it with your right hand, stand on the left side of the horse, grasp the bit in your left hand, pull steadily on the strap with your right, and bear against his shoulder till you cause him to move. As soon as he lifts his weight, your pulling will raise the other foot, and



he will have to come on his knees. As soon as a horse recovers from his astonishment

at being brought to his knees, he begins to resist, that is, he rears upon his hind legs and springs about in a manner that is truly alarming. At this juncture you must remember that your business is not to set your strength against the horse's strength, but merely to follow him about, holding the strap just tight enough to prevent him from putting out his off fore-leg. As long as you keep close to him and behind his shoulders, you are in little danger. The bridle in the left hand must be used like steering lines: by pulling to the right or



left as occasion requires, the horse, turning on his hind legs, may be guided just as a boat is steered by the rudder lines; or, pulling straight, the horse may be fatigued, by being forced to walk backwards. The strap, passing through the surcingle, keeps the trainer in his right place; he is not to pull or in any way fatigue himself more than he can help, but, standing upright, simply follow the horse about, guiding him with the bridle away from the walls when needful. To do this well requires considerable nerve, coolness, and patience, and at times agility; for sometimes the animal will make a very stout fight, and even jump sideways with both fore-legs fast. When held and guided properly, few horses resist longer than ten minutes. Usually, after a violent struggle of eight minutes, the animal sinks forward on his knees, sweating profusely, with heaving flanks and quivering tail. Then is the time to get him into a comfortable position for lying down; if he still resists, he may be forced by the bit to walk backwards. Then, too, by pushing gently at his shoulder, or by pulling steadily the off-rein, you can get him to fall, in the one case, on the near side, in the other, on the off side; but the assistance rendered should be so slight that the horse must not be able to resist it. The horse will often give a final spring, when he is supposed to be quite beaten; at length, however, he slides over, and lies down, panting and exhausted, on his side. If he is full of corn, and well bred, take advantage of the moment to tie up the off fore-leg to the surcingle, as securely as the other, in a slip loop-knot. Now let the horse recover

his wind, and then encourage him to make a second fight. It will often be more stubborn and fierce than the first. The object



of this tying-up operation is, that he shall thoroughly exhaust without hurting himself, and that he shall be convinced that it is you who, by your superior strength, have conquered him, and that you are always able to conquer him. When the horse lies down for the second or third time, thoroughly beaten, the time has arrived for teaching a few more of the practical parts of horse-training. When you have done all that you desire to the subdued horse—smoothed his ears, if fidgety about the ears; the hind-legs, if a kicker; shown him a saddle, and allowed him to smell it, and then placed it on his back; mounted him yourself, and pulled him all over—take off all the straps. In moving round him for



the purpose of gentling him, walk slowly, always from the head round the tail, and again to the head; scrape the sweat off him with a scraper; rub him down with a wisp; smooth the hair of his legs, and draw the fore-one straight out. If he has fought hard, he will lie like a dead horse, and scarcely stir. You must now again go over him with a very gentle motion of the hand, and with this operation will be completed your first and most important lesson. You may now mount on the back of an unbroken colt, and teach him that you do not hurt

him in that attitude: if he were standing upright, he might resist, and throw you, from fright; but as he is exhausted and powerless, he has time to find out that you mean him no harm. You can lay a saddle or harness on him, if he has previously shown aversion to them, or any part of them: his head, tail, and legs are all safe for your friendly caresses; do not spare them, and speak to him all the time. If he has hitherto resisted shoeing, now is the time for handling his fore and hind legs kindly, yet, if he attempts to resist, with a voice of authority. If he is a violent, savage, confirmed kicker, as soon as he is down, put a pair of hobbles on his hind-legs. These must be held by an assistant on whom you can depend, and passed through the rings of the surcingle; with the horse's fore-legs tied, you may usefully spend an hour, in handling his legs, tapping the hoofs with your hand or a hammer—all this to be done in a firm, measured, soothiug manner; only now and then, if he resist, crying, as you paralyse him with the ropes, "Wo, ho!" in a determined manner. It is by this continued soothing and handling, that you establish confidence between the animal and yourself. Patting him as much as you deem needful, say for ten minutes or a quarter of an hour, you may encourage him to rise. Some horses will require a good deal of helping, and their fore-legs drawing out before them. It may be as well to remark, that the handling of the limbs, especially of colts, requires caution. If a horse, unstrapped, attempts to rise, you may easily stop him by taking hold of a fore-leg, and doubling it back to the strapped position. If by chance he should be too quick, do not resist, for it is an essential principle never to enter into a contest with a horse unless you are certain of being victorious. In all these operations you must be calm and not hurried. When you have to deal with a savage kicker that you wish to subdue and compel to lie down, have a leather surcingle with a ring sewed on the belly part; and when the hobbles are buckled on the hind-legs, pass the ropes through the rings, and when the horse rises again, by buckling up one fore-leg, and pulling steadily, when needful, at the hind-legs, or tying the hobble ropes to a collar, you reduce him to perfect helplessness; he finds that he cannot rear, for you pull his hind-legs, nor kick, for you can pull at all three legs; and after a few attempts he gives up in despair. In practising the art of taming, an average horse may be subdued by an average horseman; but a fierce, determined, vicious horse requires a man above the average in temper, courage, and activity; activity and skill in steering being of more importance than strength. It is seldom necessary to lay a colt down more than twice. Perhaps the best way is to begin practising the strap movements with a donkey, or a quiet horse full of grass or water, and so go on from day to day with the same perseverance as though you were practising skating or any other art. Remember you must not be in a

hurry, and you must not chatter. When you feel impatient, you had better leave off, and begin again another day. And the same with your horse: you must not tire him with one lesson, but you must give him at least one lesson every day, and two or three, if he is very nervous. The most curious circumstance of all, in connection with this strapping-up and laying-down process, is, that the moment the horse rises, he seems to have contracted a personal friendship for the operator, and with a very little encouragement will generally follow him; this feeling may as well be encouraged, by giving the animal a piece of carrot, apple, or bread. It is an excellent practice to accustom all horses to strange sounds and sights; and of very great importance to young horses which are to be ridden or driven in large towns. *To accustom a horse to a drum:* place it near him on the ground, and, without facing him, induce him to smell it again and again, until he is thoroughly accustomed to it. Then lift it up, and slowly place it on the side of his neck, where he can see it, and tap it gently with a stick or your finger. If he starts, pause, and let him carefully examine it. Then re-commence, gradually moving it backwards, until it rests on his withers, by degrees playing louder and louder, pausing always when he seems alarmed, to let him look at it and smell, if needful. In a very few minutes you may play with all your force, without his taking any notice. When this practice has been repeated a few times, the horse, however spirited, will rest his nose unmoved on the big drum while the loudest sounds are being produced. *To teach a horse to tolerate an open umbrella:* go through the same cautious forms; let him see it and smell it; open it by degrees; gain your point inch by inch, passing it always from his eyes to his neck, and from his neck to his back and tail. In half an hour any horse may be taught that no injury is intended him; and he may thus be familiarized to many other articles, such as the riding-habit, saddle-cloth, &c. *To accustom a horse to a bit.*—Use a large smooth snaffle-bit, so as not to hurt his mouth, with a bar on each side, to prevent the bit from pulling through either way. This you should attach to the head-stall of the bridle, and put it on the horse without any reins to it, and let him run loose in a large stable or shed for some time, until he becomes somewhat used to the bit, and will bear it without trying to get it out of his mouth. It would be well, if convenient, to repeat this several times before you do anything more with the animal; as soon as he will bear the bit, attach a single rein to it. You should also have a halter on the horse, or a bridle made after the fashion of a halter, with a strap to it, so that you can hold or lead him about without pulling on the bit much. He is now ready for the saddle. *To break a horse to harness.*—Place him in a light stable, take the harness and raise it very slowly until he can see it, let him smell and feel it with his nose, until he becomes familiar with it, so that you can put it on

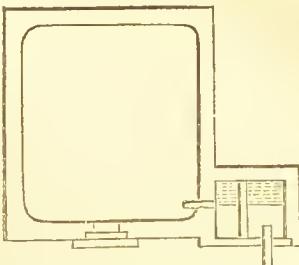
and rattle it about without his being disturbed by it. As soon as he will bear this, put on the lines, caress him as you draw them over him, and drive him about in the stable, till he will bear them over his hips. As soon as he is familiar with the harness and lines, take him out and put him by the side of a gentle horse. Always use a bridle without blinkers when you are breaking a horse to harness. Lead him to or around a light gig or phaeton; let him look at it, touch it with his nose, and stand by it till he does not care for it; then pull the shafts a little to the left, and stand your horse in front of the off-wheel. Let some one stand on the right side of the horse, and hold him by the bit, while you stand on the left side facing the vehicle. This will keep him straight. Run your left hand back and let it rest on his hip, and lay hold of the shafts with your right, bringing up very gently to the left hand, which still remains stationary. Do not let anything but your arm touch his back, and as soon as you have the shafts square over him, let the person on the opposite side take hold of one of them, and lower them very gently to the shaft-bearers. Be very slow and deliberate about hitching; the longer time you take the better, as a general thing. When you have the shafts placed, shake them slightly, so that the horse will feel them on each side. As soon as he will bear them without starting, fasten the braces, &c., and urge him along very slowly. Let one man lead the horse, to keep him gentle, while the other works gradually back with the lines till he can get behind and drive him. After you have driven him in this way for a short distance, you can get into the vehicle, and all will go right. It is very important that the horse should proceed gently when he is first hitched. After he has been walked awhile, there is not nearly so much danger of his starting. If the animal is very wild, it is better to put up one foot the first time he is driven. With the leg strapped up, the lighter the break or gig the better, and four wheels are better than two. *To make a horse follow a person.*—Turn him into a large stable or shed, where there is no chance of escape, with a halter or bridle on. Go to him and coax him a little, take hold of his halter and turn him towards you, at the same time touching him lightly over the hips with a long whip. Lead him the length of the stable, rubbing him on the neck, saying, in a steady tone of voice, as you lead him, "Come along, boy!" or use his name instead of "boy," if you choose. Every time you turn, touch him slightly with the whip, to make him step up close to you, and then caress him with your hand. He will soon learn to hurry up, to escape the whip and to be caressed, and you can make him follow you around without taking hold of the halter. If he should stop and turn from you, give him a few sharp cuts about the hind legs, and he will soon turn his head towards you, when you must always caress him. A few lessons of this kind will make him run after you, when he sees the motion of the whip; in twenty or thirty minutes

he will follow you about the stable. After you have given him two or three lessons in the stable, take him out into a small field and train him; and thence you can take him into the road and make him follow you anywhere and run after you. *To make a horse stand without holding.*—After he has been well broken to follow you, place him in the centre of the stable, begin at his head to caress him, gradually working backward. If he move, give him a cut with the whip, and put him back to the same spot whence he started. If he stand, caress him as before, and continue coaxing him in this way until you get round him, without making him move. Keep walking round him, increasing your pace, and only touch him occasionally. Enlarge your circle as you walk round, and if he then moves, give him another cut with the whip, and put him back to his place. If he stands, go to him frequently and caress him, and then walk round him again. Do not keep him in one position too long at a time, but make him come to you occasionally, and follow you around the stable. Then make him stand in another place, and proceed as before. You should not train your horse more than half an hour at a time. *To cure jibbing.*—Horses contract the dangerous vice of jibbing, by improper management. When a horse jibs in harness, it is generally from some mismanagement, excitement, confusion, or from not knowing how to pull; but seldom from any unwillingness to perform all that he understands. High-spirited, free-going horses, are the most subject to jibbing, and only so because drivers do not properly understand how to manage this kind. The whipping of horses under such a condition is an error of judgment. When a horse jibs, or is a little excited, if he wants to start quickly, or looks around and does not want to go, there is something wrong, and he needs kind treatment immediately. Caress him kindly, and if he does not understand at once what you want him to do, he will not be so much excited as to jump and break things, and do everything through fear. As long as you are calm, and keep down the excitement of the horse, the chances are that you will make him understand you, which you would not do by harsh treatment. Almost any horse, after first jibbing, will start kindly if you let him stand five or ten minutes, as though there was nothing wrong, and then speak to him with a steady voice, and turn him a little to the right or left, so as to get him in motion, before he feels the stress of the weight behind him. There is a quicker process, that will generally start a jibbing horse, but it does not apply to all. Stand him a little ahead, so that his shoulders will be against the collar, and then take up the of his fore feet in your hand, and let one driver start him, and when the weight comes against his shoulders he will try to step; then let him have his foot, and he will go right along. If you wish to cure a horse of jibbing, that has long been in that habit, a day ought to be set apart for that purpose. Put him by the side of some steady horse; have driving reins on them;

tie up all the traces and straps, so that there will be nothing to excite them; do not rein them up, but let them have their heads loose. Walk them about together for some time, as slowly and leisurely as possible; stop often, and go up to the jibbing horse and coax him. Do not whip him or do anything to excite him; but keep him as quiet as possible. He will soon learn to start off at the word, and stop whenever you tell him. As soon as he goes properly, hitch him in an empty waggon, which should be standing in a favourable position for starting. It would be well to shorten the trace-chain behind the steady horse, so that, if necessary, he can take the weight of the waggon the first time you start them. Drive only a few yards at first; watch the jibbing horse closely, and if you see that he is getting excited, stop him before he stops of his own accord, caress him a little, and start again. As soon as he goes well, drive him over an ascent a few times, and then over a larger one, occasionally adding to the load. This process will cause any horse to pull truly.

TANK.—This receptacle for holding and preserving rain-water is a very useful adjunct to a household. It may be made of brick, set in compo. The best lining is brick set in very strong mortar, and covered with a coat of cement half an inch thick. The tank should be arched over with a flat dome of brick, leaving an opening to clean it out when required, which may be closed by a stone. If the water be first filtered, there will be very little deposit. The tank shown in the engraving is circular in the ground plan, with the sides built like a well. The bottom should be in the form of a flat dome reversed, and the top also domical, with an opening left in the centre of sufficient size to admit a man to clean it out occasionally; the top of this opening should be a little above the surface of the ground, and should be covered with an oak flap, with several holes bored in it for ventilation; or the cover may be an iron grating, horizontal, and a little elevated, or conical. These tanks may be constructed of various dimensions; the depth and width should be nearly equal; a hole should also be left for the service-pipe, or that which conveys the water into the tank, and also for the pipe for the pump, if the water be drawn out by that means. The water may be filtered previously to its entering the tank; the hole for the service-pipe ought, therefore, to be near the top, and on that side most convenient for the filtering chamber; this may be about four feet in diameter, and three feet deep; across this, about twelve inches from the side next the tank, as at fig. 1, a slate partition from the top to within about six inches from the bottom should be fixed; at the bottom of the box should be put clean coarse sand, or powdered charcoal, about a foot in thickness. The pipe or opening from the filter to the reservoir, should be of ample dimensions, and be made at about eighteen or twenty inches from the bottom, in the small division or space behind the slate. Above this opening,

and at every part most convenient, should be an opening or drain to carry off the water when the tank is full. This filter should



also have a cover, that it may be cleaned out, and fresh sand or some other purifier put in as often as may be found requisite. As the water comes from the roof, it is to be first conveyed into the large division of the filtering chamber, on the opposite side of the slate partition, as in *fig. 2*, and passing through the sand, it rises in the small division purified, when it is fit to pass into the tank by the tube. If there are two or more of these filtering chambers, or if they are of greater depth, the water may be passed through the greater quantity of sand, &c., in them, and be still more purified. Both the tanks and the filtering chambers should be water-tight; if constructed of brick, the inner course may be built in Roman cement, and afterwards the whole of the inside covered with a coat of about three-quarters of an inch thick of the same material. Water from drains formed in the ground for the purpose of collecting it for domestic purposes, may be purified by passing it through a sand filter previously to its entering the tank. In constructing tanks of the above description, care must be taken to have the earth loosely filled around the brick-work, and to allow sufficient time for the work to get properly settled previously to admitting any great weight of water. A current of air is calculated to promote the purity of water in tanks, which is easily effected by the earthenware or other pipe which conveys the water from the roof being six or eight inches in diameter, with an opening left in the tank. When the prevailing winds do not blow leaves or soot on the roofs, the water will remain good, even for drinking, without cleaning out the tanks above once a year; but, in some cases, filtering by ascension has been found useful, and effected by the water being delivered by a pipe at the bottom of a cask or other vessel, from which it cannot escape till it has risen through the holes in a board covered with pebbles, sand, or powdered charcoal, as described above. Tanks or ponds dug in the chalk four feet deep, what is excavated being added to the sides roofed over, have been found very valuable for large flocks of sheep.—See CISTERNS, POND, RESERVOIRS, &c.

TANKARD COOL.—A quart of mild ale, a glass of white wine, one of brandy, one of capillaire, the juice of a lemon, a roll of the

peel pared thin, nutmeg grated at the top, a sprig of borage or balm, and a bit of toasted bread.

TANSY, CULTURE OF.—Tansy is extremely hardy, and will grow in any soil. It is easily propagated at any season by parting the roots.

TANSY PUDDING.—Pour a quart of boiling milk over a thick slice of the crust of bread; cover it till cold. Beat the yolks of six, and the whites of two eggs; pound some tansy with two or three leaves of spinach; squeeze the juice, and put in as much of it as will make the pudding of a good green colour; a glass of brandy, half a grated nutmeg, and four ounces of fresh butter; mix all the ingredients, sweeten and put into a saucepan, and stir it over the fire till it be hot. Bake it in a buttered dish for half an hour. Before serving, strew grated loaf-sugar over the top.

Milk, 1 quart; **bread,** 1 slice; **eggs,** 6, whites, 2; **tansy,** sufficient; **spinach leaves,** 3; **brandy,** 1 glass; **nutmeg,** $\frac{1}{2}$ of 1; **butter,** 4 ozs.

TAP.—An implement fitted to casks, barrels, &c., for drawing off liquids. Several improvements have been made in this article. One is so constructed that the fluid way of the tap may be inspected and cleaned; and for this purpose the front part is formed so that it may be screwed off and on the body; or an aperture is formed in the front, and a screw plug fitted into it. Another new kind of tap is formed with a conical barrel, of which the widest part forms the bottom of the tap, and with a hollow conical plug, ground to fit the barrel. The plug has only one aperture for the admission and outlet of fluid. The top of the plug is solid. In these taps, the greater the pressure of the fluid passed through them the tighter will they become; and in the case of steam or other heated fluid, the tap will not be liable to any sudden change of temperature, as the plugs, being always charged with the hot fluid, will keep the temperature uniform.

TAPE.—An article for giving light, generally made of wax, and very convenient for sealing letters or procuring a light at such time as candles or gas are not required.

TAPIOCA.—Choose the largest sort, wash it two or three times in cold water, then soak it in fresh water five or six hours, and simmer it in the same until it becomes quite clear; then put lemon-juice, wine, and sugar. The peel should have been boiled in it. It thickens very much.

TAPIOCA JELLY.—Take a quarter of a pound of tapioca, swell it thoroughly in a pint of water; then add a glass of wine, port or Madeira, with sugar to the taste. Tapioca swelled in milk is a very light and nutritious food.

TAPIOCA MILK.—Soak an ounce of tapioca in a pint of cold water for half an hour, pour off the water, and add a pint and a half of good milk; boil slowly until the tapioca is dissolved, then add sugar, nutmeg, and a little white wine, if not prohibited by the medical attendant.

TAPIOCA PUDDING.—Soak two table-spoonfuls of tapioca in a quart of cold milk for four hours; mix with it two eggs well beaten, two ounces of sugar, and a little grated lemon-peel; let it boil, stirring it all the time, to prevent the eggs from turning the milk. Bake it in a dish for half an hour; one egg is enough for common purposes.

TAPIOCA SOUP.—See SAGO SOUP.

TAR.—An empyreumatic turpentine, obtained by cutting to pieces trees of the pine or fir tribe, and exposing them to heat in a furnace or in the open air. The ordinary purposes to which tar is applied are well known. For medical purposes it has long been used as a remedy in chest affections, chronic bronchitis, incipient consumption, &c. Tar is usually administered in the shape of far-water, which is best made by digesting—stirring occasionally—one ounce of tar in thirty-two ounces of water for seven or eight days, and then straining. The dose is half a pint twice daily, mixed with milk. Tar is now chiefly used as an external application in some cases of skin diseases, either in the form of water or in that of ointment, made by melting together equal parts of tar and suet, and squeezing them through linen.

TAR VINEGAR.—This is used for imparting a smoky flavour to meat, and is made as follows.—Pour half a pound of the best pickling vinegar over an equal quantity of common tar; stir them together, and let them remain for an hour; then pour off the vinegar. The meat should be dipped into this mixture just previously to being dressed.

TARES.—This plant is cultivated for its stem and leaves, it is of hardy growth, and when sown upon rich land will return a large supply of green fodder for the consumption of horses; or for fattening cattle. The



preparation of the soil seldom consists of more than one ploughing, if for autumn sowing; and of a winter and spring ploughing when to be sown in spring. If in the latter case the land is very foul, several ploughings are given, or one ploughing and several stirrings with the cultivator. In

general, tares succeed some of the corn crops. The time of growing depends on the kind of tare and the purpose in view. The winter variety is sown in September and October; and the first sowing in spring should be as early as the season will permit. If they are to be cut green for soiling throughout the summer and autumn, which is the most advantageous method of consuming them, successive sowings should follow till the end of May. Summer tares when meant for seed ought to be sown early, otherwise the return will be imperfect. The mode of sowing tares is mostly broadcast, which should be performed as evenly as possible over the surface of well-prepared land; the seeds being afterwards covered in by proper harrowing, in order to prevent them being picked up by the birds, and to ensure their perfect vegetation and growth. After the seed is sown and the land carefully harrowed, a light roller should be drawn across, so that the surface may be smoothed, and the scythe permitted to work without interruption. It is proper also to guard the field for several days against the depredations of pigeons, which birds are very fond of tares, and will pick up a great part of the seed unless constantly watched. The quantity of seed to an acre is from two and a half to three and a half bushels, according to the time of sowing, and to whether they are to be consumed green or left to stand for a crop. The after-culture given to tares, consists merely in pulling out the larger weeds, unless they are in rows, in which case, the horse or hand hoe is employed. In reaping tares for soiling, they ought always to be cut with the scythe or the sickle, by breaking asunder the stalks and tearing up a number by the roots, rendering the second crop of little value. When mown early, they will in a moist season produce three mowings, but generally two. In reaping tares for seed, they may be either mown or taken with the sickle, and heated like peas in drying, stacking, and thrashing. Tares are eaten off the ground in some places by different kinds of live stock, particularly by sheep; and as the winter-sown variety comes early in spring, the value of this net food is then very considerable. Tare crops are sometimes made into hay, in which case more attention is found necessary than in those of most of the artificial grains, as wet is more injurious to them, and they require more sun and air; but in other respects they demand the same cautious management, in order to preserve the foliage from being lost. The time for cutting for this purpose is, when the blossoms have declined and they begin to fall and be flat. When well made, the hay is of the best and most nutritious quality. The produce of tares cut green is ten or twelve tons per acre, which shows the advantage of making these crops into hay. It is found that the spring tares are lighter, and most liable to be injured by a dry season. The produce in seed is likewise found to be considerable—from three to six sacks, and in some instances, forty bushels or more, being obtained from the acre.

TARPAULIN.—A material of a thick heavy substance, rendered waterproof, and used for covering every description of property. When merchandise and effects are conveyed in open vans, &c., a tarpaulin is indispensable, to be employed when the rain begins to descend. When not in use, it should be folded up in such a convenient form that it may be spread over anything by a single person unaided.

TARRAGON, CULTURE OF.—In a dry loamy soil, tarragon proves quite a hardy plant, but it is apt to perish in a wet situation. It is easily propagated by parting the roots, or by planting in the spring young shoots with only two or three fibres.

TARRAGON VINEGAR.—Take either the young leaves of tarragon when the plant is going into bloom, or the buds of elder-flower, and to every half peck put one gallon of vinegar, leaving it for a fortnight in a jug to ferment. Then drain it through a flannel bag, put into it a small bit of dissolved isinglass, and bottle it.

TARTAR EMETIC.—Mix twenty grains of tartar emetic and two grains of white sugar with one drachm and a half of lard. Use, as a counter-irritant in white swellings.

TARTARIC ACID.—This acid was first obtained in a separate state by Scheele; it exists in several vegetable products, but principally in bi-tartrate of potash, which is usually called cream of tartar, a salt which is deposited from wine. Tartaric acid is colourless, inodorous, and very sour; it occurs in crystals of a considerable size, the primary form of which is an oblique, rhombic prism; it suffers no change by exposure to the air; water at sixty degrees dissolves about one-fifth of its weight, and at two hundred and twelve degrees twice its weight. It combines readily with alkalies, earths, and metallic oxides, and these salts are called tartrates; many of them are usefully applied in the arts. Tartaric acid is largely employed as a discharge in calico printing, and for making what are called sodaic powders, which are imitations of soda water. Tartaric acid is entirely confined to the vegetable kingdom, and is found free or uncombined in tamarinds, in the unripe grape, and in pepper, and in combination in tamarisks, ripe grapes, gooseberries, mulberries, squill, and dandelion.

TARTLETS.—Rub over patty-pans a little bit of butter, and line them with tart or puff-paste; fill them with marmalade, preserved strawberries, raspberries, currants, or any sort of fruit, take a small bit of the paste, and with the hand roll it upon the paste-board with flour till it be stiff, and will draw out in straws; hold it in one hand and with the other draw it out, with these small strings cross the tartlets according to fancy, wet the edge, and lay on a narrow rim of paste cut with the paste-cutter.

TAXES.—The land tax, ground rent, and sewers rate, are taxes chargeable to the landlord, but by Act of Parliament the occupants of houses are required to pay all levies rated on the premises, and to deduct so much out of the rent as the landlord

ought to have paid. But if the rates payable by the landlord are not deducted from the rent of the current year, they cannot be deducted, or the amount recovered of the landlord in any subsequent year. Even if the tenant expressly covenant to pay the rent reserved, "without any deduction whatever," still it has been decided that he may deduct the land tax and ground rent. The assessed taxes, poor rates, police, lighting and cleansing rates, are the tenant's own taxes, which he is bound to pay under the penalty of having his goods distrained. Most of the water and gas companies have, also, in addition to the power of cutting off the supply of water or light, authority to detain for rates in arrear, in the same manner as landlords for their rent.

TAXIDERMY.—The art of bird-stuffing, which, in the hands of the naturalist, becomes a very interesting pursuit, and may be readily performed by adhering to the following instructions. In the first place, the manipulator must buy a medical student's dissecting-case, that will contain half-a-dozen knives of the kind he wants, two pairs of sharp pointed scissors, a pair of forceps, and most likely some chain-hooks and a blow-pipe. These last two items he may lay aside; but all the rest are just the things he wants, and buying them second-hand they will cost him no more than a couple of knives and one pair of scissors would if purchased new. He will also require a pair of round and a pair of flat pliers for his wire; a pair of cutting pliers, which, as they are to be used both for wire and for hones, should be pointed ones; a three-cornered file, wire of various sizes, plain and coloured glass eyes, some soft thread, some fine twine, tow, cotton-wool, preservation powder, arsenical soap, with brush for laying on the same, and some camphor. For the arsenical soap take—powdered arsenic, 2 ounces; camphor, 5 ounces; white soap, 2 ounces; salt of tartar, 6 drachms; powdered lime, 2 drachms. The soap is to be cut in very thin slices, and put in a crucible with a small quantity of water, over a gentle fire, and frequently stirred with a piece of wood. When properly melted, the lime and salts of tartar must be added; the arsenic is then to be stirred in, and lastly the camphor (reduced to powder with a little spirits of wine) is to be mixed in, off the fire. For the preservative powder take—powdered arsenic, 4 ounces; burnt alum, 4 ounces; tanner's bark, 8 ounces; mix, reduce to powder, and pass through a fine sieve: then add camphor (reduced to powder with spirits of wine), 2 ounces; musk, 30 grains. Both these preparations must be kept in well-closed jars. The soap, when ready for use, should be about the consistency of Devonshire cream. The bird-stuffer should then get the tools and preparations ready, and shoot an old starling (by far the best bird for a beginner). Take a stick of the required size and make two holes with an awl the natural distance apart for the bird's legs; pass the leg-wires through the holes, and twist them

firmly round the stick; now fasten the end of the stick firm, either in a vice or nailed to a block; press the legs a little backwards, making the feet the pivot; then put one finger just below the knee-joints on the front of the legs and press the body forwards, making the knees the pivots, until you have the body in a natural position as regards the legs. Now take hold of the body with one hand, and with the other press back the neck-wire to rather more than at right angles with the body; then take the middle of the neck-wire between your fingers, and with the other hand press the free extremity that projects beyond the head, and bend down the head until you have the natural form. To place the wings, supposing the bird to be at rest: cut two pieces of wire two or three inches long or more, according to the size of the bird, and point one end; take the wing in your hand, and pass the pointed end of the wire through the last joint, or rather on the free side of the last joint; now lift the wing with one hand, and, with one finger of the other, push the first bone, part of which you cut off in skinning the bird, well up under the skin of the back; then bring the wing down to the side, and push the wire firmly into the body. Open the mouth, and take out the wool with which the eye sockets are filled; then stuff the neck, through the mouth, until the proper size; place a little wool in the eye-socket, on the further, upper, and under side. Take with the forceps one of the glass eyes by the little piece of wire which projects from one side, and insert carefully into the socket, making it project rather too much through the lids. Place a little more wool behind the glass eye, and fill up the opening into the eye-sockets and the mouth with it, and tie the beak together. If the eyes now project too much, press them gently back with the finger. Take two little thin strips of wood, drive a strong pin through the centre of one piece nearly to the head; place this under the tail near its base, and pass the point of the pin between the two centre quills; place the centre of the other strip of wood on the point of the pin, and press it down until the tail is held firmly between the two pieces of wood, when you can spread it to the required extent. With a smooth-pointed wire (a knitting-needle will do), arrange every feather in its place, and then wind soft cotton over the whole body to keep the feathers in place, and put the bird in a freely-ventilated room to dry. In ducks, hens, &c., the neck is so long and narrow that the skin cannot be drawn over the head with these birds, therefore, skin the neck as high as you can and cut it off; make a cut through the skin from the angle of the jaw to the bottom of the piece of neck still attached to the head, and remove the neck, brain, tongue, &c., through the opening. Most bird-stuffers, and every beginner makes the opening in the neck on the side next the back of the case the bird is to be placed in; but, after very little practice, you may do this so neatly that it is not of much consequence on which side you do it.

TEA, ADULTERATION OF.—A very considerable amount of ingenuity is displayed, both at home and abroad, in the adulteration of tea, as well as in the manufacture of spurious articles in imitation of it. First, are to be considered the *adulterations of black tea*. The chief adulterations to which black tea is subject consist in the use of leaves other than those of tea, in the re-preparation of exhausted tea-leaves, and in the employment of substances, either for the purpose of imparting colour and astringency to the infusion of the leaves, or to glaze and face the surface of the dried leaves, so that they present an improved appearance to the eye. It has been repeatedly ascertained that the leaves of various British plants are sometimes used in this country in the adulteration of tea, among which are the following: beech, elm, horse-chestnut, plane, faucey oak, willow, poplar, hawthorn, and sloe. The leaves are dried, broken into small pieces, and usually mixed up with a paste made of gum and catechu; afterwards they are ground and reduced to a powder, which, when coloured with rose-pink, is mixed either with the dust of genuine tea, or with inferior descriptions of black tea. The great difficulty experienced in the re-preparation of exhausted tea-leaves, is to cause them to resume the twisted form imparted by the Chinese method of rolling and drying the leaves. For this purpose, the leaves are steeped in a strong solution of gum; this, in drying, occasions the contraction of the leaves, and causes them to assume to a certain degree their original appearance; the solution at the same time imparts a polished surface to the leaves. The forms of the greater number of the leaves, even after this preparation, are still very different from those of tea, as originally prepared; the leaves are more broken, and agglutinated into small flattened or rounded masses. This circumstance, and the shining appearance of the leaves, are sufficient to enable the experienced eye to detect samples of tea manufactured from exhausted leaves, even when mixed with a portion of unused tea. When a solution of sulphate of iron is brought into contact with a solution of tannin, or one of tea (which contains a large amount of tanin), the liquid becomes deeply coloured. Of this fact the fabricators of spurious tea are well aware: for they avail themselves of it, and frequently add to the gum-water to be used in making up exhausted tea-leaves, a proportion of sulphate of iron. Rose-pink is another adulterating agent; it consists of the colouring matter of logwood, in combination with carbonate of lime. An infusion of the wood is first prepared, through which the lime is diffused, and this, in subsiding, carries with it the characteristic colour, which, incorporated with the lime, forms rose-pink. The presence of logwood is immediately detected by moistening a small portion of the tea-leaves of the sample with water, and rubbing it gently about upon a sheet of white paper, which, in that case, will be stained bluish-black; moreover, if a portion of the tea, being thrown in cold water,

imparts immediately to the liquid a pinkish or purplish colour, which is rendered red by the addition of a few drops of sulphuric acid, it is a sign of the presence of logwood; for genuine black tea produces only after a time a golden brown liquor, which is not reddened by sulphuric acid. One of the substances resorted to for facing tea is plumbago, or black lead, which gives to the surface of the leaves a black, shining, and metallic or leaden appearance, so characteristic, that when once seen it may be again readily recognised. Also, if a thin slice be removed from the surface of one of the leaves faced with this substance, and placed under the microscope, it will be seen to be thickly studded with numerous minute black particles. Again, if one or two teaspoonsfuls of such tea be infused in boiling water, the liquid, after a time, will, in many cases, when the quantity of facing is considerable, acquire a blackish hue, and, on evaporation, the bottom of the vessel containing it will be found to exhibit the dark, shining, and characteristic coating of black lead. *The adulteration of green tea* may be next considered. The development of the characteristic colour of the leaves of green tea is stated to take place during the third roasting in the *kwo*, the leaves at the end of the second roasting being of a dark olive colour, almost black. In the third roasting, which is, in fact, the final drying, the heat of the fire is diminished, the quantity put into the *kwo* is greatly increased, and the time of roasting regulated. At this period, a change of colour takes place in the leaves, they beginning to assume a bluish tint, resembling the bloom on fruit. The colours used in the facing of green tea are usually three: yellow, blue, and white. The yellow and blue colours, when mixed, form a green, and white is added, either to lessen the intensity of the former colours, or else to give polish to the surface of the leaves. Prussian blue is the substance most frequently employed in the facing of spurious green tea. It is distinguished from indigo by the iron which enters into its composition, and which may be detected by the ordinary tests, as well as by the non-effect of chlorine in bleaching it. Under the microscope it may be recognised by the form and colour of the particles of which it consists, as also by the action of liquor potassæ, and dilute sulphuric acid; the first turns the fragments of a reddish hue, and the other restores the colour. Although not absolutely poisonous, yet when introduced into the system, even in minute quantities, it is in some cases capable of exerting an injurious action. Verdigris, Dutch pink, chromate of potash, chrome yellow, and other substances more or less noxious, are used in the adulteration of black tea. The detection of adulteration will be considerably facilitated by pointing out the simple methods to be adopted for determining whether a sample of tea be sufficiently coloured or not. For this purpose, if the leaves be coated to any considerable extent, it will be sufficient simply to view one or two of them

as opaque objects, with a glass of one inch focus, when the colouring matters entering into the composition of the facing will be detected as minute specks or particles, each reflecting its appropriate tincture. Another method of determining the same point is to scrape gently the surface of two or three of the leaves with a penknife, when, if they be faced, the colouring matters may be detected in the powder thus separated, viewed as an opaque object. A third method is to place five or six leaves on a slip of glass, moistening them with a few drops of water, and, after the leaves have become softened, firmly squeezing the water out between the finger and thumb; this will then be found to contain more or less of the ingredients forming the facing, should such have been employed. Or, should it be desirable to obtain the results on a large scale, half an ounce or so of the leaves may be agitated in a little water for a few minutes; this will detect much of the facing, without unfolding the leaves, and after a time the facing will collect as a sediment at the bottom of the vessel. Lastly, the tea-dust, more or less of which is present in nearly every sample of tea, is usually found to contain the ingredients used in the facing in considerable quantity, and from its examination satisfactory results may in general be very readily obtained. Having by one or other of the above processes determined whether the sample of tea be faced, the next step is to ascertain the nature of the substances used for this purpose. The blue colouring matter has generally been found to be either Prussian blue or indigo, most frequently the former. Prussian blue is recognised under the microscope by the angular form of the fragments, and by their brilliant and transparent blue colour, but most decidedly by the action of liquor potassæ, which quickly destroys the blue, tinging the fragments of a dull reddish-brown colour. Indigo is distinguished under the same circumstances by the irregular form of the particles, their granular texture, and greenish-blue tint, but chiefly by the fact that the colour is not destroyed by the liquor potassæ. Turmeric powder is at once recognised by its size and bright yellow colour; and Dutch pink, by the action of liquor potassæ and acetic acid: the one reagent converts the bright yellow into a dark brown, and the other occasions effervescence. The chief points to be recapitulated are: that the principal *black teas*, namely, the Congous and Souchongs, arrive in this country for the most part in a genuine state; that certain descriptions of black tea, as scented Orange, Pekoe, and Caper, are invariably adulterated, the adulteration consisting in general in the glazing of leaves with plumbago or black lead; the caper likewise being subject to admixture with other substances, as paddy-husk, lie tea, and leaves other than those of tea. That several varieties of a spurious caper, or black gunpowder, are prepared, which consist of tea-dust, and sometimes the dust of other leaves and sand, made up into little masses with gum, and faced with plumbago, Prussian blue, and turmeric

powder: in some cases these imitations are sold separately, but most frequently they are used to mix with and adulterate the better qualities of caper. With respect to *green tea*, the principal conclusions are, that these teas, with the exception of a few of British growth and manufacture from Assam, are invariably adulterated; that is to say, are glazed with colouring matters of different kinds. That the colouring matters used are in general Prussian blue, turmeric powder, and China clay, other ingredients being sometimes but not frequently employed. That these colouring matters possess properties calculated to affect the health injuriously. That in this country there is really no such thing as a green tea; that is, a tea which possesses a naturally green hue. That green teas, and more especially the gunpowders, in addition to being faced and glazed, are more subject to adulteration in other ways than black teas, as by admixture with leaves not those of tea, with paddy-husk, and particularly with lie tea. That lie tea is prepared so as to resemble green tea, and is extensively used by the Chinese themselves to adulterate gunpowder tea. The above are the most important conclusions as to the condition of black and green teas as imported, but these articles undergo further deterioration in our own country, as follows:—That exhausted tea-leaves are frequently made up with gum, &c., and resold to the public as genuine black tea, and, when artificially coloured and glazed, even as green tea. That the substances employed in the colouring are in many cases very much more objectionable and injurious than those used by the Chinese, being often highly poisonous. That it is not uncommon thing for tea, both black and green, to be fabricated from leaves not those of tea, and possessing no properties in common with the leaves of that plant. That black lie tea is often coloured and extensively employed by our own dealers and grocers for the adulteration of green tea.

TEA BISCUITS.—These biscuits are made with the finest flour, fresh butter, seasoned with a little salt, and melted in warm milk. For a moderate quantity, one pound of flour, two ounces of butter, and one pint of milk, will be sufficient. Make it into a stiff paste, adding to it a large tablespoonful of strong brewer's yeast, and leave it covered near the fire, allowing time enough to make it rise. When quite light, knead it well, roll it out an inch thick, and form it into round cakes of the size of a muffin. Bake them in buttered pans until they are of a light brown; split and butter them, and send them to table. If intended to be kept and eaten cold, the paste must be rolled out very thin and cut of a smaller size.

TEA CAKE.—Rub into a quart of dried flour, of the finest kind, a quarter of a pound of butter; then beat up two eggs with two teaspoonfuls of sifted sugar, and two teaspoonfuls of washed brewer's or unwashed distiller's yeast; pour this liquid mixture into the centre of the flour, and add a pint of warm milk as you mix it; beat it up with

the hand until it comes off without sticking; set it to rise before the fire, having covered it with a cloth. When it has remained there for an hour, make it up into good-sized cakes, as thick as a finger; set them in tin plates to rise before the fire during ten minutes, then bake them in a slow oven. These cakes may be split and buttered hot from the oven, or split, toasted, and buttered, after they are cold.

TEA CREAM.—Take some good green tea, and infuse half an ounce in a pint of milk, which pour boiling hot over the tea; cover it, and when it has infused a quarter of an hour, pour off the milk, mix it with half a pint of cream and the yolks of six eggs; strain through a tamis, and put it in a basin (not a saucépan) of hot water, or on a gentle fire, till thick enough.

TEA, DIETETIC PROPERTIES OF.—The dietetic and medicinal properties of tea are thus detailed (putting out of view the qualities usually imparted by the addition of sugar, milk, or cream):—It acts on the system as a stimulus or sedative, according to the strength of the infusion that is taken. When taken in moderation, it produces effects at once agreeable and beneficial; the gentle stimulation to the stomach certainly assists digestion. When used in larger quantity, its primary action is that of a stimulus. Its well-known effect of inducing wakefulness illustrates this. To many persons, when taken late in the evening—and in some degree when taken strong at almost any time—it produces a very sensible degree of stimulation, and a state of sleepless excitability. Besides inducing wakefulness, tea apparently sharpens the mental faculties, and, perhaps in an especial degree, the imagination. For, generally speaking, authors, and others who have labour of this description to perform, find that they can work with much greater facility immediately after partaking of this beverage than at any other time. Green tea has, generally speaking, more stimulating, black tea more sedative properties. The stimulating effects are, however, always and necessarily followed by sedative effects, which may amount in extreme cases to depression, or to a degree of narcotism; and, in most cases, it acts as a narcotic on the organs of excretion, producing more or less visceral torpidity or sluggishness. The stimulant properties of tea are not so strongly exhibited when it is taken with a solid meal as when with a small quantity of light food. Taken along with food, it is at times serviceable to assist the digestion of the meal, and it unquestionably serves an important purpose in completing and perfecting the last stages of digestion, when, for instance, it is taken three or four hours after a hearty dinner. The effect of tea on the second stage of digestion, and probably on the secretion of the bile, points out and explains its value when taken as just stated, and also illustrates the well-known anxiety of the dyspeptic for tea-time, and the comparative comfort he enjoys after this beverage. It is also very valuable in cases of nervous and sick headache, and acts as a restorative.

under any circumstances where the system has been subjected to exhaustion. To the person who has a sufficiency of nourishing and wholesome food, the use of tea in moderate quantities, and at proper times, cannot be said ever to be followed by unpleasant or unsatisfactory consequences. If taken in excessive quantities, however, tea becomes decidedly debilitating to the nervous system, affecting it much in the same way as any other stimulant and narcotic. In cases where it evidently disagrees, it ought to be given up altogether; and it may be taken as a general rule, that one large cup, or two small ones, of moderately strong tea, morning and evening, are sufficient. If this quantity is exceeded, not only is it apt to cause nervousness, but the amount of warm fluid debilitates the stomach. Tea should not be drunk too hot, as it weakens the digestive organs; nor too cool, as it is apt to produce nausea; a moderate temperature, pleasant to the palate, is the best. Tea should not be drunk too weak, as it acts thus as a violent diuretic; nor too strong, on account of the injury it does to the nerves. Black tea is better than either green or mixed. A good proportion of milk and sugar should be taken with tea, to correct any possible nauseous qualities present.

TEA, GROWTH AND PREPARATION OF.—The tea-plant is a hardy, evergreen, and leafy shrub, which attains the height of from three to six feet and upwards. It is

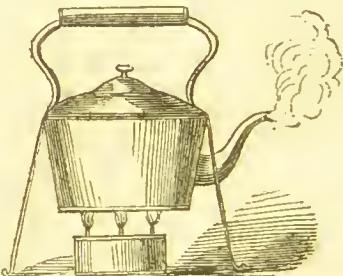


generally propagated from seed, and the plant comes to maturity in from two to three years, yielding in the course of the season three, and in some cases, four crops of leaves. The first gathering takes place early in the spring, a second in the beginning of May, a third about the middle of June, and a fourth in August. The leaves of the first gathering are the most valuable, and from them Pekoe tea, which consists of the young leaf-buds, as well as black teas of the highest quality, are prepared. Those of the last gathering are large and old leaves, and consequently inferior in flavour and value. The leaves vary considerably in size and form; the youngest leaves are narrow, con-

volute, and downy; those next in size and age have their edges daintily serrated, with the venation scarcely perceptible; in those of medium and large sizes the venation is well marked, a series of characteristic loops being formed along each margin of the leaf, and the serrations are stronger and deeper, and placed at wider intervals. The principal varieties of black tea are Bohea, which is the commonest and coarsest description, Cougou, Souchong, Caper and Padre Souchong, and Pekoe, which are of the highest quality, the last consisting of the very young unexpanded leaves, and which, when clothed with down, constitute flowery Pekoe. The principal varieties of green tea are Twankay, Hysou-skin, Young Hyson, Hyson, Imperial, and Gunpowder, which in green tea corresponds with flowery Pekoe in black. Imperial, Hyson, and Young Hyson, consist of the second and third gatherings, while the light and inferior teas, separated from Hyson by a winnowing machine, constitute Hyson-skin. There is, according to most writers, but one species of the tea-plant, from which the whole of the above, and many other varieties of tea are obtained, the differences depending upon soil, climate, weather, age of the leaves, and mode of preparation. The plants from which black teas are prepared are grown chiefly on the slopes of hills and ledges of mountains, while the green tea shrubs are cultivated in manured soils. Upon this circumstance many of the differences between the two varieties depend. Other differences are occasioned by the processes adopted in the preparation and roasting of the leaves. Thus, while black tea is first roasted in a shallow iron vessel, called a *kwo*, and secondly in sieves, over bright charcoal fire, green tea does not undergo the second method of roasting, but only the first, that in the *kwo*. An important operation in the manufacture of tea consists in the rolling the leaves, so as to impart to them their characteristic twisted shape. This is effected by subjecting the leaves to pressure, and rolling by the hands in a particular manner.

TEA KETTLE.—This utensil for containing the water with which tea is drawn, is made of a variety of forms, sizes, and materials, according to the particular place they are intended for. The largest and strongest for the kitchen are of copper or cast-iron; smaller tea-kettles for the same place are made of tin. With regard to these latter, it must be remarked that if they are put on the fire with a sufficient quantity of water the solder of the joints would not melt, because this being a moveable body carries off the greater part of the heat from the metal, and does not become hot enough for the solder to melt. If, however, the kettle should remain on the fire with very little water, it is evident that the solder which fixes the spout will not be protected; and should the flame be permitted to reach this part, the spout becomes unsoldered, wholly or in part, and the kettle leaks, an accident well known to happen too frequently. The best tin tea-kettles have the spout formed,

not of tin-plate, but of stout iron tinned, without any seam, and fixed on to the kettle by being passed through a circular hole in the body, to which it is soldered inside, and therefore is safe from the flame; the handles of these are likewise made of stout iron tinned, and fixed on by rivets. Tea-kettles for the breakfast and tea table are generally made of more elegant forms, and various contrivances are used to keep the water boiling while it is off the fire. For this purpose a tea-kettle may be placed upon a stand which contains a flat iron heater that keeps it boiling. These are usually made of tin-plate, and are very economical and convenient. By means of a properly contrived handle, the tea-kettle and stand may be carried together. Another way is to keep the water boiling by iron heaters, or tubes of copper attached to the tea-kettle, and reaching to the bottom. Within these tubes are put irons red hot. It is important that the lid of the kettle should not fit so tight as to prevent the escape of steam. When the lid fits perfectly tight, there is danger of the steam forcing the boiling water out suddenly through the spout, by pressing upon the surface of the fluid within. Another plan is as follows: If a common tea-kettle be placed upon an open fire, the heat and flame that rises round the sides has little effect, and it is only that which strikes the bottom that conduces materially to the heating of the water. By surrounding the body of the kettle with a cylinder of stout iron, as seen in the engraving,



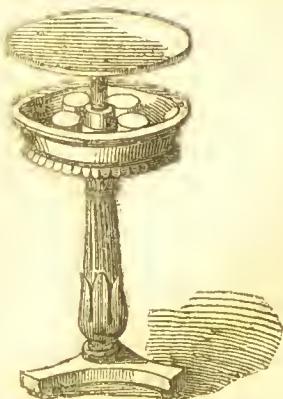
extending deeper than the bottom of the kettle, and soldered tight round the top, there will, of course, be a cavity between this casing and the kettle. The heat applied, whether that of a fire or lamp, will not only strike the bottom, but will accumulate to a considerable degree round the sides, and occasion the water to boil much sooner than in the ordinary way. The best tea-kettles have handles formed of wood, glass, or ivory. One with a metallic handle cannot be touched when filled with boiling water, without using a kettle holder, made of some non-conducting substance, as cloth of some kind, or by wrapping a piece of paper round it, while a wooden, ivory, or glass handle, being itself a bad conductor, may be used without inconvenience.

TEA-MAKING. DIRECTIONS FOR.—Tastes differ regarding the flavour of various sorts of tea, some preferring all black,

others all green, and many a mixture of both in different quantities. A good mixture in point of flavour is two-fifths black, two-fifths green, and one-fifth gunpowder. In point of wholesomeness, however, all black is decidedly the best. The flavour and the strength of tea depends, in a great measure, upon the manner in which it is made, and the best way of conducting this process will be ascertained to be as follows : —The proportion of tea to be used is commonly considered as one teaspoonful for each person and one for the pot ; this proportion will yield a beverage of an agreeable strength. An important feature is to have the water ready boiling, not simmering, as is too commonly the case ; for, unless the water be boiling, the tea cannot possibly be good. Having well scalded the teapot, put in the tea, and pour over it about one-third of the water the pot will contain, and set it by the side of the fire for ten minutes, then fill up the pot and allow it to remain for six or eight minutes longer, by which time it will be thoroughly drawn. In pouring it out, be careful not to drain the pot to the very last cup, and also distribute the tea in such a manner among the partakers of it, that one portion does not have all the strong and the other portion all the weak. Never add fresh tea to that which has already been made by way of strengthening it, for it will not have that effect ; but in the event of its being too weak, then put the additional tea into a large teacup, fill it up with boiling water, and leave it there closely covered for a few minutes, after which pour the contents into the teapot. Another plan recommended is always to use two teapots, each of sufficient size to hold the quantity of tea required ; pour the whole of the water over the tea at once, and do not allow it to stand more than three or four minutes, when it should be poured into the other teapot and served from that. If the party is large, this process must be repeated. By this means all the tea will be of equal strength, and the aromatic flavour will be extracted without any of the injurious matter. Soft water is better for making tea with than hard water, the former is least impregnated with foreign mixture, and will always yield the greatest quantity of the tanning matter, and will strike the deepest black, with sulphate of iron in solution. If, however, hard water must of necessity be used, its deleterious properties may be remedied by the addition of a little carbonate of soda. If tea be used in a tea urn, care must be taken that the water boils, and that the urn heater is red hot ; then, in the first place, dust the urn, and put the boiling water into it, before you put in the heater ; and, to prevent an unpleasant taste being imparted, or spoiling the boiling water by dust, or particles of the hot urn (which may rub off the heater as it is being put into its place), be careful to put on the round rim or ring before you put in the red hot heater ; and be sure, also, to avoid pouring any water into the place where the heater goes, otherwise, when the iron is put in, the steam may rush out and scald the

operator seriously. It is a well-ascertained fact, that the infusion of tea made in silver or polished metal teapots is stronger than that which is produced in black or other kinds of earthenware. This is explained on the principle that polished surfaces retain heat much better than dark, rough surfaces, and that, consequently, the heat being confined in the former case, must act more powerfully than in the latter. It is further certain that the silver or metal teapot, when filled a second time, produces worse tea than the earthenware vessel, and that it is advisable to use the earthenware pot, unless a silver or metal one can be procured sufficiently large to contain at once all that may be required. These facts are readily explained by considering that the action of the heat retained by the silver vessel so far exhausts the herb as to leave very little soluble substance for a second infusion ; whereas the reduced temperature of the water in the earthenware pot, by extracting only a small proportion at first, leaves some soluble matter for the action of a subsequent infusion. The reason for pouring boiling water into the teapot before the infusion is made is, that the vessel being previously warm may abstract less heat from the mixture, and thus admit a more powerful action. Neither is it difficult to explain the fact why the infusion of tea is stronger if only a small quantity of boiling water be first used, and more be added some time afterwards ; for if we consider that only the water immediately in contact with the herb can act upon it, and that it cools very rapidly, and especially in earthenware vessels, it is clear that the effect will be greater where the heat is kept up by additions of boiling water, than where the vessel is filled at once, and the fluid suffered gradually to cool. When the infusion has once been completed, it is found that any other addition of the herb only affords a very small increase in the strength, the water having cooled much below the boiling point, and consequently acting very slightly.

TEA POISE.—An article of furniture



kept in the drawingroom as a receptacle for various kinds of tea ready for use.

is sometimes made with a rising top, as shown in the annexed figure, and the various canisters are arranged within.

TEA SYRUP.—Pour a quarter of a pint of boiling water over three ounces of young hyson tea; let it stand an hour, then add a pint of brandy; cork it up well, let it stand for ten days, shaking it frequently; then strain it, sweeten with clarified syrup, and bottle it. A teaspoonful of this in a glass of water makes a very refreshing drink.

TEA URN.—The tea-urn is the most elegant mode of supplying water for tea. It is made in the form of a vase, but in a great variety of patterns. The accompanying engraving represents one of the usual



kind. In the centre there is a vertical tube, into which a cylinder of iron heated red hot is slipped down, and covered by a small lid, and that by the lid of the urn. This keeps the water in the urn at a boiling heat. Some tea-urns have lamps beneath them, instead of iron heaters, which have the advantage of keeping the water hot any length of time.

TEA URN, TO CLEAN.—In an earthen gallipot put an ounce of bees-wax, cut up in small pieces; set it by the fireside until perfectly melted and quite hot, very near boiling heat; remove the jar from the fire, and stir into it rather less than a tablespoonful of salad oil, and rather more than a tablespoonful of best spirits of turpentine, continue stirring till well mixed and nearly cold; fill the urn with boiling water so as to make it thoroughly hot, apply a thin coating of the above mixture, and rub with a soft cloth till all stickiness is removed; then polish with a clean rag and a little crocus powder. The crocus powder must be very fine, so as to sift through muslin.

TEAL.—A bird which is a great favourite with sportsmen. About April, these birds collect a quantity of grass and rushes, and make a covered nest, the opening for the

most part to the south; in this they lay from ten to fourteen eggs, of a dirty white,



and as big as those of a pullet. The nest of the teal is never placed in such a situation as to rise and fall with the water. It is found on all the grassy lochs of the north, and sometimes some hundred yards from the water's edge, and at others, close by; but at all times a dry spot is selected, where it deposits its eggs. Teal shooting bears a certain resemblance to some of our inland shootings which are neither common nor within the reach of every one; and it is a most amusing sport when pursued on the banks of a small river or even a large brook, well sheltered by bushes. When hunted up, a teal seldom rises in the air, but usually skims along the stream, and presents a fine shot. If it cannot be got at through the interception of trees or large bushes, one of the party should run forward so as to circumvent its entire escape out of reach. It is not often, however, that a teal flies away altogether. The teal will also frequently swim down stream the moment after it drops; so that if the shooter does not cast his eye quickly that way, instead of continuing to look for him in one spot, the bird will probably catch sight of the sportsman and fly up, while his attention is being directed to the wrong place.

TEAL, TO DRESS.—Half-roast them; when they come to table slice the breast, strew on pepper and salt, pour on a little port wine, and squeeze the juice of a lemon over; put some gravy to this, set the plate on a lamp, cut up the bird, let it remain over the lamp till done, turning it.

TEETOTAL DRINKS.—As there are many persons who wholly abstain from alcoholic liquors, the following collection of recipes for uniotoxicating beverages are herewith given under a general head, for the purpose of easy reference:—

Apple Baked Drink.—Bake half a dozen apples without peeling them, put them into a jug, and pour half a gallon of boiling water over them whilst they are hot, cover the whole up until cold, then sweeten with honey or sugar.

Apple Drink.—Boil five or six ripe pippins, cut into six or eight pieces, in half a gallon of water until quite soft, strain through a sieve, and sweeten with honey and sugar.

Apricot Effervescent Drink.—Take a pint of the juice of bruised apricots, filter until clear, and make into a syrup with half a pound of sugar, then add an ounce of tartaric acid, bottle, and cork securely. For a tumbler three parts full of water, add two tablespoonfuls of the syrup, and a scruple of carbonate of soda, stir well, and drink while effervescent.

Barley Water with Honey.—Add the juice and rind of one lemon to a tablespoonful of honey, and two teacupfuls of barley, put it into a jug, and pour a quart of boiling water upon it.

Barley Water with Isinglass.—Take a teaspoonful of pearl barley, six lumps of loaf sugar of the ordinary size, half a lemon, and enough isinglass to clear it. Pour half a gallon of spring water on these ingredients, and let it stand till cold.

Cool Cup.—Weigh six ounces of sugar in lumps, and extract the essence from the rind of a large fresh lemon by rubbing the lumps of sugar upon it; then put them into a deep jug, and the strained juice of one lemon and a half. When the sugar is dissolved, pour in a bottle of cider, add nearly half a small nutmeg lightly grated, and serve the cup with or without some sprigs of fresh halm or borage in it. If closely covered down and placed on ice for a short time, it will be more agreeable as a summer beverage.

Currant Water.—Squeeze a pound of currants into a quart of water, add four or five ounces of pounded sugar. Mix well, strain, and ice, or allow to cool.

Effervescent Waters.—These are made extemporaneously by adding to twenty grains of bi-carbonate of soda (or potash), fifteen grains of citric (or tartaric acid), about half a teaspoonful of coarsely powdered white sugar or a teaspoonful of syrup may be added, and if cleared, two or three drops of essence of lemon. The soda with either of the acids makes soda water, the potash, potash water, and the addition of the lemon and sugar converts it into effervescent lemonade. If ginger beer be desired, it is only necessary to add about ten grains of powdered ginger instead of the lemon essence. A tablespoonful of lemon-juice (obtained from half a lemon or an orange) is equal to fifteen grains of citric acid, and may be substituted for it and the essence with advantage. The method of proceeding in each case is as follows:—Dissolve the soda or potash in a wineglassful of water with the sugar or syrup, and the essence of ginger or lemon, when they are used; then dissolve the acid in an equal quantity of water (or squeeze the lemon) in another glass; pour the two together, and drink while effervescent.

Fruit Beverages.—Fruit drinks should be made with the juice of fresh fruit when it can be obtained, in preference to syrup or jam, and the usual method of preparing these drinks is to boil the juice which has been squeezed from the fruit, with a little

water, straining it afterwards through a flannel bag, and adding as much syrup or sugar, lemon-juice and water, which should be perfectly cold before use.

Ginger Drink.—Take a pound of cream of tartar, three pounds of loaf sugar, a quarter of a pound of coarsely pounded ginger, boil these ingredients together in four gallons of water for ten minutes; skim it clear, and let it stand till nearly cold; add a spoonful of yeast, stir the whole together, let it stand all night to settle, then bottle in small stone bottles securely corked; in three days it will be fit for use.

Iced Beverages.—These are made by the addition of ice to other materials, by which the flavour of the whole is rendered more grateful to the palate. Clean and pure ice is necessary for the purpose.

Indian Syrup.—Take five pounds of lump sugar, two ounces of citric acid, and a gallon of boiling water; when cold, add half a drachm of essence of lemon, stir it well, and bottle it. About two tablespoonfuls to a glass of cold water.

Lemon Kali.—Take of highly-dried citric or tartaric acid twenty-four grains, carbonate of soda, also highly-dried, one scruple, coarsely powdered refined sugar (also dried) two drachms, and essence of lemon one or two drops. The whole must be kept in a very dry bottle. When required for use, a dessertspoonful will make a pleasant beverage when added to three parts of a tumbler of water.

Lemon Water.—Put two slices of lemon, thinly peeled, into a teapot, a small piece of peel, and sugar to sweeten; pour in a pint of boiling water, and stop it closely for two hours.

Lemon Barley Water.—Rub two ounces of sugar on the rind of a lemon, so as to extract its flavour; press out the juice on to the sugar, and pour on it a quart of plain barley water, made without lemon or sugar.

Normandy Pippin Water.—Cut up five or six Normandy pippins into small pieces, boil them for half an hour in a quart of water, with a little lemon-peel, and a clove; sweeten to taste, strain, and drink when cold.

Orange Barley Water.—Rub two ounces of sugar on the rind of an orange, and afterwards press out the juice upon the sugar, upon which pour a quart of plain barley water.

Peach Water.—Mash eight ripe peaches, add the juice of a lemon, add a teacupful of syrup made in the ordinary way, and a pint and a half of water; strain through a sieve, and mix with cold water when required for drinking.

Raspberry Effervescent Draught.—Take three pints of raspberry juice, filter clear, and make a syrup with a pound and a half of sugar, and add three ounces of tartaric acid. Keep it in well-corked bottles. For a tumbler three parts full of water, add two tablespoonfuls of the syrup and a scruple of carbonate of soda.

Rhubarb Sherbet.—Boil six or eight sticks of rhubarb for ten minutes in a quart of water; strain the liquor into a jug, in which a thinly pared lemon-peel is placed, and two

tablespoonfuls of clarified sugar; let it stand for five or six hours, and it will then be fit to drink.

Sugar Water.—Boil a sufficient quantity of sugar in water to make it pleasantly sweet, let it stand till cool, then drink with ice, or not, as desired. The same drink may be made by simply dissolving two or three lumps of sugar in a tumblerful of water.

Turkish Sherbet.—Wash a small quarter of veal, and put it on the fire with nine pints of water; skim it well, and let it boil till reduced to two pints; run it through a sieve, and when cold add to it a pint and a half of lemon-juice, and two pounds of loaf sugar which has been made into a syrup with a pint and a half of water, and cleared with the white of an egg.

Welsh Nectar.—Boil two gallons of water, and let it stand to cool; add a pound of raisins, two pounds of loaf sugar, the juice of three lemons, and their rinds thinly peeled, stir the whole daily for four days, then strain it through a jelly-bag, bottle it, and cork it securely. In ten days or a fortnight it will be fit for use.—See, also, APPLE WATER, BARLEY WATER, CHOCOLATE, CIDER, COCOA, COFFEE, CRANBERRY WATER, CURDS AND WHEY, GINGER BEER, ICED WATER, LEMONADE, ORANGE-ADE, ORGEAT, PERRY, RASPBERRY VINEGAR, RICE WATER, SHERBET, SODA-WATER, STRAWBERRY WATER, TOAST AND WATER, &c.

TEETH, PRESERVATION OF.—The preservation of the teeth ought to form an important item in the care of the person. The possession of sound teeth is a great blessing, as they not only promote the process of digestion, but keep the breath sweet and pure. Unsound and unclean teeth are also most unsightly and unpleasant for other persons to be brought in contact with; for these combined reasons, the greatest care should be observed in the management of these important organs. It must be understood that the teeth are bones thinly covered over with a fine enamel, and this enamel is more or less substantial in different persons. Whenever this enamel is worn through by too coarse a powder or too frequently cleansing the teeth, or eaten through by a scorbutic humour in the gums, the tooth cannot long remain sound. The teeth, therefore, are to be cleaned but with great precaution, for if the enamel is worn off faster by cleaning the outside than nature supplies it within, the teeth will probably suffer more by this method than by neglect. A butcher's skewer, or the wood with which they are made must be bruised and bit at the end, till with a little use it will become the softest and best brush for this purpose; and in general the teeth may be cleaned with this brush without any powder. It is necessary to observe that, very near the gums of persons whose teeth are otherwise good, there is apt to grow a false kind of enamel, both within and without, and this false enamel or tartar, if neglected, pushes the gums higher and higher till it leaves the fangs of the teeth quite bare, above the true enamel, so that sound teeth are destroyed, because the gum

has forsaken that part which is not sheathed and protected. In the summer months this tartar may be effectually removed by partaking daily of strawberries; eating plentifully of watercress is also considered a good remedy. An excellent tincture for this defect will be found as follows:—Mix six ounces of tincture of Peruvian bark with half an ounce of sal-ammoniac. Shake these well for a few moments every time before the tincture is used. The method of using it is, to take a spoonful and hold it near the teeth, then with a finger dipped in, rubbing the gums and teeth, which are afterwards to be washed with warm water. Another method of preserving the teeth is to wash out the mouth with water after every meal, especially if animal food has been eaten; by these means the particles of food lodging about the teeth and gums are dislodged, which, when allowed to remain and accumulate, proves excessively injurious. Much harm is frequently done to the teeth by cleaning them with too hard a brush or deleterious dentifrices, in either case the enamel being scratched and otherwise injured. As a matter of course, the preservation of the teeth is greatly influenced by what is eaten and drunk. All things that are either very hot or very cold are extremely bad; acids are especially injurious, as are also sweets. *The decaying of teeth* is partly due to chemical decomposition of the food lodged between the teeth in eating. When there is joined to this an unhealthy or weak condition of the ivory, which is thus rendered incapable of resisting the action of external causes, and also the continual pressure of the adjacent teeth, when too close together, then decay is almost sure to take place in some part or other of the crown. When it occurs in the sides of the necks, just below the enamel, the cause always is in the food, and generally so when in the middle of the crown of the molars; but sometimes decay takes place beneath the enamel, and long before the slightest fissure in this part can be detected by any ordinary observation, or, at all events, while there is no opening large enough to admit the food. Besides these causes, another exists in the uncovered state of the roots, or fangs, or in these being covered by tartar instead of gum, both of which circumstances tend to produce decomposition and decay, and should be cautiously guarded against. When a cavity is actually developed, the sooner it is filled the better. When it is small and has not opened into the natural cavity of the tooth, gold leaf is the best material, the dentist previously cutting away the decayed matter and pressing in the gold with great force. When, however, this cavity is exposed, gold is useless under ordinary circumstances. The following are some of the best methods of filling teeth when beginning to decay:—1. Mix thirteen parts of pure finely powdered caustic lime with twelve parts of anhydrous phosphoric acid. This powder is moist during the mixing, and while in that state is to be introduced into the decayed tooth. The place in the tooth is to be made dry

before receiving the mixture. This kind of filling must be used two or three minutes after being prepared. Soon after it is lodged in the decayed cavity, it becomes very solid. 2. Take pure anhydrous phosphoric acid, forty-eight grains, pure caustic (unslaked) lime, forty-two grains. Finely pulverize each separately, and keep them separate in well-stopped bottles till wanted. For use, mix the required quantity in a small mortar, as rapidly and perfectly as possible, and at once press the dry mixture in the cavity of the tooth. The surface should then be smoothed off and finished by moistening with water. This cement soon acquires great hardness; it is very white and durable, and in its composition resembles the natural earthy matter of the teeth. The whole process requires expertness to succeed; but the latter, when attained, will amply repay for one or two failures. If the composition be not mixed and applied quickly it becomes moist, and is therefore unfit for use. In many cases the odour arising from carious teeth is very offensive; to remedy this, the mouth should be well rinsed with a teaspoonful of the solution of chloride of soda in a tumbler of water, which will have the desired effect.—
See DENTIFRICE, TOOTHACHE, &c.

TEETHING.—This natural process in a child's development, usually commences about the third month, though it is seldom till the fifth or sixth that the teeth make their appearance through the gums. The period when the teeth may be expected is indicated by an increased irritability of the infant, the gums become tense, shiny, and swollen; while the excited glands in the neighbourhood pour out so large a quantity of saliva, that it overflows the mouth, causing the infant to *drivel*, as the nurses call this natural salivation. At the same time the child, as if to relieve the heat and irritation it feels, thrusts its hands into its mouth in the attempt to do what the watchful mother will do for it—*scratch* the top of the gum with her nail, or, making a rasp of a rough crust, or a proper *gum-ring*, rub it freely along the top ridge, that by abrading it of the binding cuticle, the imprisoned gum may have the power to expand. As the only benefit that can accrue from rubbing the child's gum is the tearing or relaxing of this fine but tenacious cuticle, all smooth surfaces, such as coral or ivory rings, are perfectly useless; such instruments to be of any service, should be cut into small diamonds like a fine file, and used frequently by the parent, exactly in that manner. The crust, though serviceable from its roughness, is dangerous from the chance of crumbs breaking off and getting into the infant's throat. After the irritation and drivelling have continued for some weeks, a white line or a round spot appears on the top of the gum of the lower jaw, and ultimately of the upper; through these white spots the teeth finally burst their way in the following order: two incisors of the lower jaw are the first to make their appearance, though frequently several weeks elapse between the advent of the first and second; the next cut

are the four incisors of the upper, then the remaining two incisors of the lower jaw, one on each side, but not joining. There is now a pause for a short time in the process. The next in succession are the four eye teeth in either jaw, thus completing the infantine set of sixteen teeth. Another pause, usually of some months, succeeds before nature resumes her active operations; when she does, it is to place one double tooth on each side of both jaws, thus completing the child's complement of twenty teeth. When these are shed, and nature completes her office, instead of the first ten she places sixteen teeth in each jaw, thus doubling her first complement, and making the adult set thirty-two. Each tooth as it is formed makes half a circle on its axis, and rising sideways, pierces the gum with the extreme point of its edge, revolving as it rises to the perpendicular.

The *diseases* that teething gives rise to in infants are very numerous, and the consequences of so natural a process are some of the most remarkable facts connected with the development of the human economy. The disorders excited by difficult dentition are, diarrhoea, convulsions, mesenteric disease, water on the brain, rickets, and remittent fever—all of them to the infant fearfully mortal diseases. Each of these affections, though so different in its locality, and so opposite in its symptoms, is induced by the same cause, long-continued irritation in the gums reacting on the delicate organization of the brain and nervous system. And, as this irritation is caused by the difficulty the imprisoned tooth finds in escaping from the fibrous membrane in which it is enveloped, and making its way through the tightly bound gum, it becomes the duty of the medical man or parent, as soon as the first constitutional disturbance manifests itself, to assist the efforts of nature to effect the escape of the tooth, by dividing the gum and leaving an aperture through which the new-formed tooth may reach its destination. But, as *lancing* the gums, as the process is called, will be worse than needless unless *effectually done*, the gums should never be cut unless the tooth can be plainly felt below, and to be of service, the incision must be carried down to the tooth, or else the unyielding membrane in which it is encased will be undivided, and the child put to the inconvenience of lancing without effecting the slightest benefit. As, however, the irritation commences from the first entrance of the tooth into the gum on emerging from its bony socket, and long before the actual pressure of the tooth can cause the graver mischief, or simply from the increased amount of blood circulating in the parts, it is evident that lancing the gums *is*, so early a stage of formation is not only impolitic, but hurtful. Another mode of relief, both for the diarrhoea and convulsions that so frequently occur in weakly infants at this period, must be looked for; and this mode in all stages of dentition, from the first to the last, will be found either a source of instant relief or of certain recovery: this remedy is the *hot bath*, which, in all cases of

infantine suffering, is the mother's best hope, and should be her unshaken reliance. The time a child should be kept in a hot bath should seldom exceed two minutes; and, as the object is to unload some congested organ, or to relieve certain parts of their excess of blood by causing a rapid determination to the skin, the water should be hot enough to produce this effect as instantaneously as possible. When diarrhoea continues in despite of the hot bath, a little magnesia or a few grains of prepared chalk may be given two or three times a day until the excessive action is checked; or if unabated by these means, a few drops of tincture of kino is to be administered, as prescribed for diarrhoea.—See BATH, CONVULSIONS, DIARRHOEA, SCARLET FEVER, &c.

TELESCOPE.—The telescope invented by Galileo consisted of one convex lens and one concave lens, the distance between them being equal to the difference between the focal lengths of the two lenses. This is the construction of what is called an opera glass; and the Galilean telescope is now used chiefly for viewing objects within a theatre or an apartment, since, if considerable magnifying power were given to it, the extent of the field of view would be very small. A simple telescope may also be constructed by means of two convex lenses, which are placed at a distance from one another equal to the sum of their focal lengths. In order to afford a view of objects in the same position as they appear to have when seen by the naked eye, Mr. Dollond employed an eye-tube containing four lenses; whereas in the eye-piece invented by Huyghens, which is used in most astronomical telescopes, there are only two lenses, and objects are seen inverted. In reflecting telescopes, a speculum at one extremity of the tube serves the purpose of the object-glass in refracting telescopes, by forming an image at its focus, and the image so formed is viewed by the eye through intermediate reflectors. The Newtonian reflecting telescopes have one concave speculum at the bottom of the tube; and the rays reflected from it fall in a convergent state upon a small plane mirror, placed so as to make an angle of forty-five degrees with the axis of the telescope. After the second reflection the rays unite and form an image, which is viewed through a Huyghenian eye-piece fixed in the side of the tube opposite the plane mirror, that is, near the open end of the tube. In the Gregorian reflecting telescopes the second reflection is given by a second concave mirror, the face of which is towards the observer. The telescope constructed by the late Sir Wm. Herschel differed from the Newtonian telescopes only in having no small mirror. The surface of the great speculum, which was four feet in diameter, had a small obliquity to the axis, so that the image formed by reflection from it fell near the lower side of the tube at its open end; at this place there was a sliding apparatus, which carried a tube containing the eye-glasses. The observer, in viewing, was situated at the open end of the tube, with his back to the object, and he looked directly

towards the centre of the speculum. The reflecting telescope executed by Lord Rosse, in 1842, is fifty-six feet long, and its speculum is six feet in diameter. It is capable of being directed from the zenith to the horizon towards the south, and from the zenith to a position parallel to the earth's axis towards the north; it has also a movement in azimuth of about eight degrees on each side of the meridian. The Great Exhibition contains a noble telescope by Mr. Ross, which is considered the largest ever constructed on the refractive principle. Telescopes are, generally speaking, expensive instruments; but a cheap telescope for observing heavenly bodies may be constructed as follows:—Procure from an optician a thirty-five inch object-glass (that is, a convex glass which produces a focus of the sun's rays at the distance of thirty-six inches) and a one-inch eye-glass (that is, a convex glass producing a focus at one inch). Employ a tin-plate worker to make two tin tubes, one thirty inches long, and about an inch and a quarter in diameter; the other, ten or twelve inches long, and its diameter such that it will just slide comfortably inside the larger. The inside of these tubes should be first painted, or lined with a dull black. At the end of the larger tube an ingenious workman will have no difficulty in securing the object-glass, so that not more than an inch diameter of it shall be exposed, and at the end of the smaller tube the eye-glass must be fixed. When the open end of one tube is inserted in the open end of the other, so that the two glasses shall be about thirty-seven inches apart, a telescope will be found which will magnify the diameter of objects thirty-six times; or, in other words, will make the heavenly objects appear thirty-six times nearer. With such a telescope the satellites of Jupiter, the crescent of Venus, and the irregularities of the surface of the moon, may be distinguished. It must be observed that with this instrument all objects will appear inverted; but with regard to celestial objects, this is of no importance. This telescope will cost about four shillings; but for twice that sum a very much superior one may be constructed by obtaining a larger and better object-glass, of forty to forty-eight inches focal distance, the cost of which is three shillings and sixpence, retaining the one-inch eye-glass, and having the tubes made to suit the additional greater length of focus and diameter of object-glass. The possession of such a telescope may add greatly to the pleasure and instruction of those who have any taste for the sublime and beautiful facts of astronomy.

TENANT.—This term is here considered as the holder of lands or tenements. A tenant at will is a person who holds lands or tenements at the will or pleasure of the lessor. This tenancy at will, however, is at the will of both parties, for either may determine the holding, and quit his connection with the other, at his own pleasure. If, however, the landlord puts his tenant at will out after he has sown his land, the lessee may claim free ingress, egress, and regress to cut and carry away the profits.

It is established that if a tenant takes from year to year, either party must give a reasonable notice before the end of the year, although that reasonable notice varies according to the custom of different counties. If, however, an agreement be made to let premises so long as both parties like, and reserving as a compensation accruing from day to day, and not referable to a year or any aliquot part of a year, it does not create a holding from year to year, but a tenancy at will, strictly so called. And though the tenant has expended money on the improvement of the premises, that does not give him a term to hold until he is indemnified. The tenant who is suffered to remain in possession after his lease is expired, pending a negotiation for a new lease, is a tenant at will. The possession of the tenant at will has, in fact, been held to be the possession of the lessor. A person who lives rent free by the consent of the owner is a mere tenant at will. So is also a person who has been let into possession of land under a contract of sale which has not been completed. A tenant from year to year is one who holds lands and tenements by an uncertain and indeterminate tenure, more especially if an annual rent is reserved. Payment of rent is primary evidence of a tenancy from year to year. When a tenant, under these conditions, takes possession, he is bound to keep the premises for a year, for till then he cannot give the proper notice, which must expire at a period corresponding with that at which he took possession; and the same remark applies to the landlord. The entrance of a tenant in the middle of a quarter does not alter the nature of the tenancy; he is a tenant from the quarter-day. The tenant who holds over after his lease has expired is a tenant at will at the same rate as he paid under the lease, till the landlord receives the first quarter's rent, and then he becomes a yearly tenant at the same rent. A tenant under an agreement for a lease is a yearly tenant. An occupation pending a negotiation for a lease will entitle the landlord to sue, although no distress for rent can be levied. A tenant from year to year is only liable to repairs which are necessary from voluntary negligence, but he is not liable for accidental fires and fair wear and tear; his liability, therefore, is confined to tenantable repairs, and not to those of a substantial kind. A tenant from year to year may assign over his interest in the estate for any portion of time less than a year, or he may sublet a portion of it in the absence of any agreement to the contrary with his landlord, and this he may do without having his landlord's consent to the transfer. But though a yearly tenant can thus assign over his interest, a tenant at will cannot.

TENCH.—A fish very much like carp in its haunts and habits; the head, sides, and belly are of a yellowish green; the fins are large, and of a reddish brown colour; the tail is not forked; its body is thicker and deeper than other fish, in proportion to its length, somewhat approaching the bream in shape; the scales are smooth and small; and the eyes are of a golden

tint, encircled by a band of crimson. The tench is found in ponds, lakes, pits, and occasionally in the deep and sluggish parts of rivers; it spawns in May and June, and quickly recovers its condition. It bites best from April until August, and the baits and tackle and mode of angling for it are similar to those used for carp—worms, gentles, wasp grubs, and honey-paste being those most preferable.

TENCH BOILED.—Scale and clean the fish, then wrap them in buttered paper, and broil on a gridiron; serve with melted butter, or any other sauce.

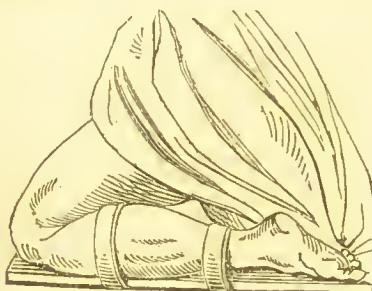
TENCH FRICASSEED.—Dip the fish for a minute or two into boiling water; then take it out, and remove the skin and the scales, beginning at the side of the head; then gut and wash it; cut it into pieces, and fricassee in the usual manner.

TENCH FRIED.—Draw and wash the fish well; then wipe it very dry; cut it open down the back; season with salt, and fry of a good colour in boiling oil or lard; serve with anchovy or any other sauce.

TENCH MARINADED.—Scale and clean the fish, and lay them in a dish, with some sweet oil, parsley, green onions, and shallots, chopped fine; a bunch of sweet herbs, salt and pepper. When they have thoroughly imbibed the flavour of this seasoning, place them between two sheets of writing-paper, well buttered, covering them with the seasoning, and broil them over a slow fire; serve without the paper, pouring over them some good sauce made hot.

TENDO ACHILLES.—The tendon of the heel; this is one of the strongest and most important sinews of the body, constituting the terminal ribbon of the two fleshy muscles that form what is called the calf of the leg. It forms the chief support and pliant motion of the lower extremity, and is not only one of the most important tendons of the body, but assists in giving more symmetry to the leg of man and woman than any other part. In certain constitutions, it is sometimes ruptured or torn by a sudden, but by no means violent movement of the body; the abruptness of the motion seeming to have the power to effect that which a much more considerable force could not achieve in deliberate movement. Thus, a sudden twist, an abrupt leap or spring, and an unexpected slip from one step to another, though only two or three inches in depth, will, in certain constitutions, cause this serious accident. The far more frequent cause of this injury, however, is the result of external violence, such as a kick, or a blow with a stick; but whatever may be the cause, the result is to throw down the injured person on his face, as if shot without the power to stand. The treatment of this accident is simple, though painful and constrained, and consists in relaxing to the utmost the muscles that participate in forming this tendon, and placing the cut or torn edges in close approximation, and so retaining them till nature throws out a sufficient amount of new callosity to re-

unite the fractured or divided edges. In a bone, this takes from six to twelve weeks; but, in a tendon, it may be completed in from three to six. When it is a simple tear or fracture, the leg is doubled back on the thigh, stretching out the foot to the utmost length of the toes, and by means of a splint laid underneath, with detached bandages of tape, securing the limb in that position. When the injury has been inflicted by a knife or cutting instrument, though the treatment is the same as regards the position of the limb, yet, as the skin is also divided, and being loose, might get between the uniting tendon, it will be necessary—having put the leg in a proper situation—to gather up the skin on each side of the incision, and sew

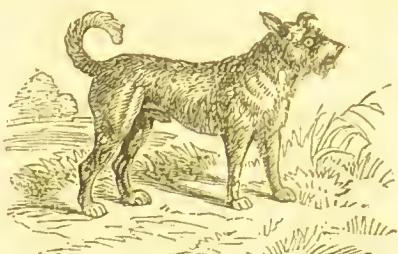


the two together close to the limb, at the sixth or fourth of an inch from their cut edges, and then cut off the superfluous skin. At the end of three weeks, the leg may be released from its confinement, and, after a few days, slowly extended, and the foot placed in a very high heeled boot with a cork heel; a little gentle exercise may be attempted every two days, having a thin slice of cork cut from the heel, till at length the foot may be placed flat on the ground, and the weight of the body thrown once more on the tendo Achilles.

TENT WINE JELLY.—Put into an earthen jar one ounce of isinglass, half an ounce of powdered gum arabic, one ounce of powdered white sugar candy, and half a pint of tent wine; place the jar in a saucepan of water, and let it simmer until the isinglass is dissolved. It will require to be stirred occasionally, and, when it is all dissolved, should be briskly stirred and poured into moulds. The jelly is made with much less trouble and expense than calf's-foot jelly, and will be found very agreeable and nourishing.

TERRIER.—Of this dog there are two prominent varieties, the rough and the smooth. The rough variety is to be met with in its best condition in Scotland, and is there to be found of various sizes, as from sixteen inches to six. A few have long hair; but the greater number have the coat rough and crisped. A mixed breed between the two is re-crossed to generate our best bull terrier; and the breed so generated is handsome, useful, and very

courageous. A large breed of English terriers has of late sprung up, most of which



are rather rough coated; but a few others are smooth. These, by being crossed with the bull-dog, have inherited undaunted courage in attacking the higher order of vermin, as the badger, &c. A small variety of terrier, with crooked legs, is also sometimes used for hunting rabbits in cover, and is extremely useful in woods; for the rabbits, as though sensible of the want of speed in their pursuers, retreat before them so slowly as to present a ready mark for the sportsman's aim.

TETANUS.—This disease, commonly called *rigid spasm*, or *lock-jaw*, is a violent contraction of the muscles of voluntary motion, attended with tension and extreme rigidity of the parts affected, and receiving particular names from the portion or part of the body affected; thus, when all the muscles of volition are affected in one invisible spasm, the disease is called *tetanus*. When the body is bent *forward*, by the spasm seizing only the anterior muscles; when it is bent *backwards* like a bow, the body resting on the heels and the top of the head, by the disease affecting the opposite class of muscles; or when it is drawn into an arch on the *right* or the *left* side, accordingly as each separate set of muscles are contracted. Besides these four, there is, however, another form, and, as being more frequently met with, of more importance to the general public: and that is that form of tetanus affecting the muscles of the jaw and neck, which from their violent contraction firmly shutting the mouth, and contracting the gullet, has been named *trismus*, or *locked jaw*. In ordinary convulsions or spasms, the contractions and relaxations are alternate, with remissions of ease, whether attended with partial or complete insensibility. The peculiarity of tetanus, however, is that the contraction of the muscles is kept up without any change or abatement; the muscular fibre being grasped in a dead lock of unmitigated intensity to the last, while the involuntary muscles, as those of respiration, are unimpaired, and the intellect of the patient is as clear, and his sensations as acute, as in the soundest health. This disease is divided into the acute and chronic, and into that proceeding spontaneously or from poisons, and called *idiopathic*, and that the consequences of wounds or injuries, greater or less, received by the body, when it is called

traumatic. As it is only intended to treat of locked jaw, or trismus, in this article, it will be sufficient to observe that the causes which generally induce this form of tetanus are of the traumatic order, and result from erysipelas, wounds of the head, lacerations of the scalp, punctures of the hands and feet, especially with rusty or jagged substances, bites from rabid animals, injuries from machinery, and sometimes from the extraction of a decayed tooth. It is a peculiarity of this fatal disease that the exciting cause is often as insignificant as the consequences are grave. Males are more subject to it than females, and, for one case of idiopathic locked jaw, there are five, the result of external injury.

Symptoms.—These commence after the injury, from a quarter of an hour to three or four days, and sometimes as late as ten or twelve weeks, with a stiffness in the back of the head and neck, extending to the shoulders, and very materially impeding the motion of the head; this gradually extends to the throat, rendering talking irksome, and, finally, swallowing impossible. The pain and rigidity of the muscles of the throat runs down the breast, and darts sharp pains through the chest, into the back; the muscles of the neck now beginning to plunge and contract, and gradually increasing their tension, drawing the head backwards, at the same time that the lower jaw is drawn upwards till it becomes in such close approximation, that it is impossible to separate them; all the muscles of the throat, cheeks and neck, feeling like bars of wood in their rigid contraction. The eyes are dilated, glaring and motionless in their sockets; the tongue, if it has not been protruded and caught in the teeth, has been drawn back into a roll at the base of the mouth; the forehead is dragged up into deep ridges, and the skin of the face is violently stretched up to the ears, where it is raised into wrinkles, giving a wild, distorted, and ghastly look to the countenance; as the last symptom is added to the series forming the disease, locked jaw is complete. Without proceeding further with the description of trismus, it will be enough to say that the disease is sometimes fatal in fifteen minutes, though the ordinary period may be taken as from four to eight days.

Treatment.—When the disease proceeds from worms, or some internal irritation—the rarest exciting cause—aperient medicines of an active nature are to be given directly, and continued till the cause is expelled; when from splinters or bits of glass, or sharp substances, lodged in the flesh, incisions should be made, and the injured part well cleaned of all cause of irritation, and where a nerve has been injured, it should be divided as soon as possible. Where the constitution is robust, and the patient strong, bleeding should be adopted to a large extent, the hot bath and friction employed, and the muscular contraction overcome by the fumes of tobacco, or by opium, morphia, or aconite; but if the constitution is debilitated, the same result must

be effected by camphor, musk, ammonia, and stimulants of wine and brandy, with cold affusions on the head from a height. Besides these, and, in fact, nearly all the remedies of the pharmacopœia, which have been employed with varying success, the wild hemp has of late years been used with more than usual advantage, and still more lately chloroform; but whatever the remedy administered, the dose requires to be very considerable to produce any effect.

TETTER.—A cutaneous disease, attended with heat, redness, and a partial inflammation of the skin, followed by a scaly eruption, appearing on different parts of the body, such as the hands, arms, chest, and head, in the form of indurated, opaque, yellowish-brown scales, or *lamelle* of the epidermis or scarf skin, which go through a regular process of maturity, desquamation, or peeling off, and reproduction, till the disease is finally eradicated. There are many varieties of this disease, differing somewhat in the size and colour of the eruption, and the locality the disease affects: thus, ringworm, lepra, dandriff, and scaly tetter, all belong to one order, though to different genera of the same disease. Any crude or indigestible food, long persisted in, and vitiating the healthy fluids of the body, may, and most frequently does, lead to this form of diseased cuticle; though, at the same time, many of the varieties magnified by dirt become contagious, and are propagated by contact. The treatment is generally very simple; the warm bath, and friction, with any gentle aperient, persevered in for a few days, with a vegetable diet, lime-juice, or acid fruits, will soon eradicate the disease. In obstinate cases, but only in such, it may be necessary to adopt the following course of medicine, at the same time avoiding all fish diet, or salt provisions. Take of

Infusion of quassia . . .	8 ounces
Nitric acid	10 drops
Muriatic acid	10 drops.

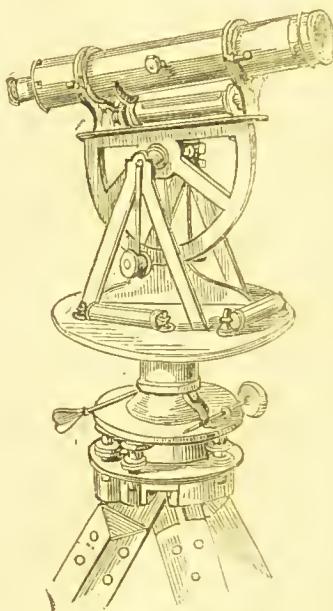
Mix, and take a tablespoonful three times a day, and every night, at bed-time, one Plummer's pill.

THATCH.—A covering of straw, rushes, or reeds, as a substitute for tiles or slates for houses, barns, ricks, stacks, and sheds. First, is to be considered the mode of thatching hay-ricks and corn-stacks, as the simplest. The rick or stack having been formed into a proper shape, either with a roof slanting from a ridge, or conical, euding in a central point, the straw is prepared by moistening it, that it may more easily bend without breaking. It is then forked up in a loose heap, the straws lying in every direction, and somewhat matted. Portions are now drawn out from this heap in handfuls, which lays the straws again in a more parallel order; these are placed in a forked stick, which will hold several of these bundles or handfuls, and are thus carried to the thatcher on the top of the rick or stack. He seizes a handful, and bending one end into a kind of noose, he inserts this into the hay or straw near the bottom of the

roof at one end, if it be a square roof, or at any convenient part, if it be a round one. He presses down the straw which he has thus inserted to about half its length, in order to form the eaves, which extend a little beyond the lower part of the roof. When he has thus laid several handfuls side by side, so as to cover about a yard in width, that is, so far as he can conveniently reach without moving his ladder, he begins another row, a little above the place where he began, so that the lower end of the straw now inserted may cover the upper part of the first row, as tiles do each other. Thus he proceeds upwards till he comes to the upper ridge of the roof, or to the point of the cone in a round stack. In the latter case, the covering diminishes to a point, so as to form a triangle. The ladder is now shifted a yard to one side, and the same operation is performed, care being taken that each fresh handful put on shall be interwoven with that which lies beside it, so that no water can possibly pass between them. Thus the work proceeds until the roof is completed, and it only remains to secure the upper ridge in a square stack, or the point of the cone in a round one. In the first case, the highest layer of straw is made to extend beyond the ridge on both sides, and the ends are brought together, and stand up like the bristles on a hog. A rope of straw has been prepared, and many small rods, about two feet long, and cut sharp at the point; these are inserted just below the ridge, in a line with it, and about a foot apart; one end of the straw rope is inserted into the stack, and twisted firmly round the projecting end of the first rod; it is then wound once round the next rod, and so on the whole length of the ridge: this is done on both sides. The straws which form the ridge are now cut with shears horizontally, to give it a neat finish, and at each end a kind of ornament is usually made by winding a straw rope round a handful of the projecting straw, forming a kind of knot or bow, according to the taste of the thatcher. Rods and straw ropes twisted round them are inserted near the edge of the slanting side and all along the eaves, which prevent the wind from blowing off the thatch. The only difference in the thatch of a round rick is, that it is brought to one point, where it is tied with straw ropes wound round it, and formed into a kind of bow; the rods are inserted a little below in a circle, and the straw rope twisted round them, and likewise around the circular eaves. Barley is generally put into square stacks, and wheat in round ones. When the outside is neatly trimmed, and cut smooth, so that no birds can lodge in it, wheat may be kept for years without danger of injury or loss, much better than in a barn, or even in a granary. In thatching sheds and buildings which are to last many years, the straw is prepared in the same manner, but the ends of the handfuls, as they are put on a lathed roof, are kept down by means of long rods, which are tied to the laths of the roof by means of strong tar twine. A much thicker coat of straw is

put on; and rye-straw, which has a solid stem, is preferred as more lasting, and less liable to be filled with water than hollow stems. Instead of straw ropes, split willow is used, and the rods which are inserted are much nearer each other, and more carefully secured. As this kind of thatching is a peculiar trade, it requires a regular apprenticeship to be a master of it.

THEODOLITE. — A surveying instrument for measuring the angular distances between objects projected in the plane of the horizon. In accurate surveying, when the instrument used for observing the angles is a sextant or reflecting circle, or such that its plane must be brought into the plane of the three objects which form the angular points of the triangle to be



measured, the altitudes of the two distant objects above the horizon of the observer must be determined, and a calculation is then necessary to reduce the observed angles to the plane of the horizon. The object of the theodolite is to measure the horizontal angles at once, and thereby render the previous calculation, and even the observation of the altitudes unnecessary. The theodolite, as now generally constructed for the purposes of ordinary surveying, may be described as follows:—The horizontal limb or circle consists of two circular plates which turn freely on each other. The lower or graduated plate receives the divisions of the circle, and the upper or vernier plate has two sets of vernier divisions diametrically opposite. The vertical axis consists of two conical parts, one working within

the other. The external part is attached to the graduated plate, and the internal to the vernier plate. The diameter of the under plate is somewhat larger than that of the vernier plate, and its edge is sloped off to receive the graduations, and portions of the opposite edges of the vernier plate are sloped off in like manner to receive the vernier divisions. The graduation is usually to thirty minutes of a degree, but is subdivided by the verniers into single minutes; and in a well-made instrument quarter minutes may be estimated by the eye. For the purpose of adjusting the plane of the circle to the horizon, the external axis is fitted into a ball, which works in a socket between two parallel plates, held firmly together by the ball and the socket, the under plate being connected with the staff-head supporting the instrument. But this adjustment may be also made by a tripod support, having a foot screw at each extremity acting against a plate of metal supported by a staff. Upon the plane of the vernier plate are placed two spirit levels at right angles to each other, with their proper adjusting screws, by which the circle is brought accurately into the horizontal plane indicated by the levels. The centre of the circle is adjusted over the point which forms the centre of the station, from which the observation is to be made by means of a plummet. In some theodolites the telescope is supported in the manner of a transit instrument; that is to say, the telescope and the horizontal axis on which it turns form one piece, and the vertical limb is a complete circle. By this construction the instrument becomes better adapted for observing the altitude of stars, and consequently for finding the direction of the meridian and the azimuths of objects, or for other astronomical purposes. In theodolites for common topographical purposes, the horizontal circle is seldom more than five inches in diameter; but as the double vertical axis gives the means of carrying round the telescope from the first object to the second without disturbing the graduated circle, then, by clamping the vernier and graduated plate by bringing it back, and the graduated circle along with it, to the first object, the measure of the angle may be repeated any number of times. The principal adjustments of the theodolite are—first, to rectify the line of collimation of the telescope; secondly, to make the axis of the horizontal limb truly vertical; and thirdly, to adjust the zero of altitude.

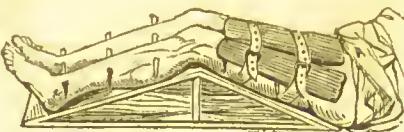
THERMOMETER.—The thermometer is an instrument for ascertaining the degree of heat or cold in any body. In Fahrenheit's common thermometer, the scale of degrees is marked as its commencement at 32° , which is the freezing point; and it rises to 212° , the degree at which water boils. That which is called Reaumur's scale has the interval between the points of freezing and boiling water determined by experiment, and the distance between them is divided into eighty parts, the zero of the scale being at the freezing point. Register Thermometers are of the greatest importance

in meteorology, for enabling the observer to ascertain the highest or lowest point of a thermometer scale at which the column of mercury may have stood during his absence; and several contrivances have been adopted by artists in order to obtain this end: of these, one, which is still preferred, was invented by Mr. Fix, whose name the instrument bears; it is described in the "Philosophical Transactions" for 1782. It consists of a long tube bent so as to form three parallel branches, of which the central branch is an elongated bulb, and the rest of the tube has a capillary bore. The lower portion of the bent tube contains mercury, which rises in the two side branches to certain points, and the bulb is filled with spirit of wine, which, passing over a bend at the top, descends to the upper extremity of the mercury in one of the branches; the upper end of the other branch is also filled with spirit, and this is hermetically sealed. Two small indices of steel, coated with glass, are introduced in the branches, and are capable of being forced upwards by the rising of the column of mercury in either tube, and they have about them a fine wire or thread of glass; so that they will remain stationary where they happen to be when the head of the column recedes from them. Their lower extremities consequently indicate the points at which the end of the columns may have stood before such recess.

THIGH, BROKEN.—This accident may occur at any part of the bone, though more frequently taking place at the upper third of the shaft, the neck of the bone, or the lower third. The injury is easily detected by the bending at the seat of the affected part, and the total inability to lift the limb. The fracture of the thigh may be either transverse—across the bone—or oblique, and, besides the pain and immobility, may be known by the shortening of the limb in one case, and the disfigurement in the other. **Treatment:**—There are many methods now in use for what is called the reduction of a fractured thigh; either that of laying the patient on a firm flat bed or mattress, and, having placed the broken bone in position, and introduced pads between the knees and insteps, to buckle the two limbs together in three or four places; or, after reducing the fracture, envelope the whole limb from the toes to the waist in a broad bandage, and then applying a long splint, extending from under the armpit to beyond the foot, keep the limb extended and firmly in its place till the union is effected; or, by means of a double inclined plane for the whole limb, and short splints for the thigh—a process, which, as it admits of greater comfort to the patient, and is more convenient for the surgeon, is regarded as the best. The double inclined plane is an apparatus composed of two boards half an inch thick, and two feet wide, one reaching



from the hips to the under part of the knee, and the other from thence to the



heel: these are then to be joined by a brace in the middle, and secured on a horizontal board by braces and ties at either end; the apex, or centre angle which comes under the knee, being about six inches from the horizontal plane. The fractured bone having been properly approximated and secured in position by two padded splints, tied by broad firm ligatures at certain distances, pads are to be placed in the hollows of the limb, and the sound leg being placed beside the other, both are to be connected by straps at the thigh, knee, ankles, and toes; and the inclined plane having been covered with smooth padding, the two members are to be raised on the plane, precaution being taken by a few rolls of a bandage, that the limbs cannot slip off—a protection that is sometimes guaranteed by pegs let into the sides of the double incline.

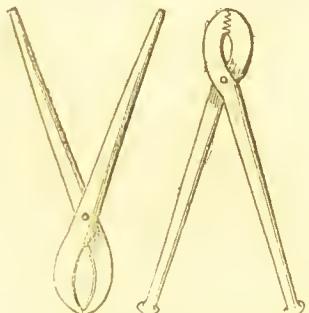
THIMBLE.—A species of guard worn upon the finger when sewing or otherwise engaged with the needle, for the purpose of protecting the finger from injury. The best thimbles are made of gold and silver. Those manufactured of baser metals, and especially of brass, are apt to gall the flesh, and, therefore, should not be worn if one of the better kind can be procured; it would be as well to wear, in addition to the thimble, a guard upon the forefinger of the left hand, which would not only protect it from festers and other sores, but will prevent that dark and disagreeable appearance, which may be seen on the hands of females who sew much, and neglect this precaution.

THIRST.—In most cases, either in health or disease, the necessity for the use of diluents is made known by the occurrence of thirst. This sensation, which is perceived in the mouth and throat principally, is evidently only felt from sympathy with the body generally, for it is not relieved by the mere moistening of these parts, but only by a supply of fluid afforded to the system at large, either, as in most cases, by the stomach, or through the medium of the skin. In health, a certain amount of fluid or of diluent is required periodically by the body to supply the waste continually going on by the discharge of vapour from the lungs and skin, and by the excretions. The amount must, of course, vary somewhat according to the conditions of the surrounding atmosphere as to temperature and dryness, and also according to the amount of exercise taken; a man taking much active exertion, and perspiring profusely, requiring a much larger support of diluent than one who is not. The unnecessary use

of diluents by persons in health, is undoubtedly hurtful, particularly when the amount is taken along with the food; the gastric juice is thereby diluted too greatly, and its digestive powers impaired; moreover, persons who drink largely with their food are apt to wash it down in a half-masticated condition, and to take more than is necessary. A certain amount of dilution is, nevertheless, requisite for digestion, and error on this side also is undoubtedly committed. The instinctive desire for fluid in cholera and in diseases generally which are attended with fever, ought not to be neglected. There appears to be almost a superstitious fear with many of allowing the sick to drink cold water. There are, however, few safer prescriptions, none, perhaps, which may be more freely carried out by unprofessional persons, than the unrestricted allowance of cool, unstimulating drink, in all acute diseases in which thirst exists, and especially if fever be present. Diluents may be administered through the medium of the skin, and thirst and distress allayed in this way, when the power of swallowing is impaired or lost, either temporarily or permanently, or when the only diluent at command, such as seawater, is unfit for drinking. Thirst is frequently occasioned in an unusual degree by partaking too freely of sauces, condiments, and other provocatives, with food; not only are the importunings of thirst thus begotten, but indigestion is induced, by the large quantity of fluid which is taken to allay the thirst. The inconvenience and pangs of thirst may be allayed by carrying a pebble in the mouth, and by bathing the wrists in cold water.

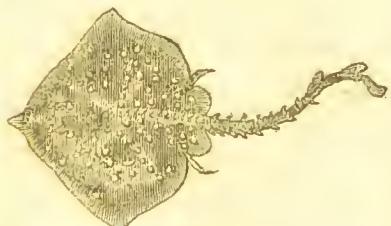
THISTLE.—A well-known prickly weed, common in corn-fields and pastures. Wherever thistles grow naturally, it is a sure sign that the land is strong and of tolerably good quality; but they are at the same time a great annoyance to every plant intended to be cultivated. There are no plants over which a more watchful eye should be kept than the thistle tribe, as they are not only useless, but occupy much ground, and, being furnished with winged downy seeds, are capable of being multiplied and carried to almost any distance; besides, they do much mischief by impeding the work both in handling hay and corn crops. Where they prevail to a great extent, there is no remedy like breaking up the land and taking a course of crops, for palliative remedies are of little avail. Hand-weeding, when the weeds are confined to local spots, and are only just beginning to spread generally over the soil, will be found effectual; but when once the pasture becomes generally infected with the seeds and roots of these plants, no time should be lost in using the plough, harrow, and horse hoe, and a judicious course of cleaning the crops before returning the land again to permanent pasture. In crops of artificial grasses, such as sainfoin, lucerne, &c., and when it is impracticable under such circumstances to draw out this weed without injuring the crops, a good remedy will be found in the

use of common salt. Children may be employed to apply the salt by hand to the crown of the weed. If the least part of the root of the thistle be left, it springs up season after season. Besides possessing this principle of vitality in the root, its seeds are so winged with down as to render dissemination, even to a great distance, by means of the wind, almost certain. It is obvious that the annual and biennial species of thistles may be readily removed by preventing them running to seed and disseminating themselves, which is best effected by carefully eradicating them or frequently mowing them over close to the surface, and rolling. But in the perennial kinds, from their roots continuing in the earth, increasing and throwing out new shoots and stems every year, there is much difficulty in extirpating them; and they perhaps can be destroyed in no other way than by rooting them out of arable land by a thistle-drawer, deep ploughing, and frequent harrowings, or by fallowing or laying the land down to



pasture; the annual species seldom appear in pasture lands. But for destroying the common thistles, the best method is by the thistle drawers seen in the engraving.

THORNBACK.—The thornback is a flat fish, somewhat differing in structure from the class to which it belongs. The eyes are upon the upper surface, and the mouth



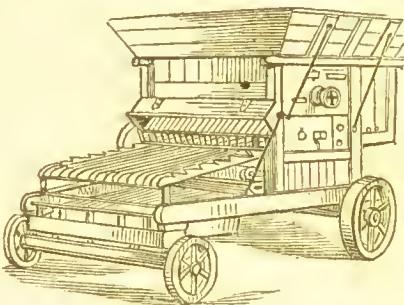
underneath. The skin is spotted, and studded with spines and tubercles, and the bony tail is covered with formidable spines.

THORNBACK, TO DRESS.—This fish is frequently sold as skate. It should be hung one day at least previous to dressing; then boiled in slices, or fried with eggs, or in butter.

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THREAD.—A well-known material used for sewing, somewhat coarser than either silk or cotton. It may be rendered stronger, and also easier to work with, by being drawn through bees-wax. In the sale of thread a systematic kind of dishonesty is practised, in giving the reel upon which the thread is wound an appearance of containing far more than it really does. Other manufacturers set their face against this system, and supply the public with honestly-wound reels. The names of these manufacturers are to be found upon the reels issuing from their factories.

THRESHING MACHINE.—An implement used for beating out the corn from



grain or other crops. To the farmer on an extensive scale the threshing machine is absolutely necessary. Various machines for effecting the purpose of threshing have been lately invented. Portable threshing machinæ, such as seen in the engraving, and the horse-work attached complete, are now made by all the leading machine-makers, and are so constructed that the machine packs upon the gear, and the whole, mounted upon two wheels, is easily conveyed from place to place. Many persons keep three or four different sizes and let them out, finding one man to superintend the feeding; the farmer who employs it finding horses to work it and the labourers to attend upon it. They are paid for at so much per day, or quarter, for the corn threshed; when the latter form of payment is adopted, it is important to look well after the work, or the corn may not be threshed clean. Whenever this operation is being carried on, the eye of the master should be constantly turned to it, to see that no delay occurs, and that it be well done, and that the bearings and running parts of the machine are kept well oiled. If peas are being threshed, it is important to see that they do not get split, which will sometimes happen, and the men continue threshing, not being aware of it. To thresh well, the man who feeds must be used to it, and deliver the sheaves openly and with care; threshing should not be performed when the atmosphere is surcharged with water, if it can possibly be avoided. After the kernels have been threshed from the straw by the threshing-machine, they will have to be passed through the process of winnowing, which will remove all the small pieces of

husk, the small seeds, and whatever dirt may have become mixed with it.

THRIFT, or SEA PINK.—The common thrift (*statice Armeria*) has been long introduced from the sea-shore and the mountain top into our gardens, where its rapid propagation has obtained it the name of thrift. There are two varieties, the pink and the scarlet, the latter of which, though the prettiest, is not so common as the other. Thrift improves by cultivation, but in the garden it is apt to rot and decay when it is permitted to stand for several successive years without removal. The roots should be planted in September, though they will grow at almost any season.

THROAT, AFFECTIONS OF.—The throat is subject to two forms of inflammatory action, acute and chronic; of the former, there are two conditions, which, though both present acute inflammatory action, and both are diseases of a dangerous character, are very different in their symptoms and their consequences. These are—1st. *Inflammatory sore throat.* A disease that attacks persons of either sex, and of all ages up to forty or forty-five years; after which period it is but rarely met with. It is very often found attacking several persons at the same time like an epidemic, in spring and autumn, especially so when there are great vicissitudes of atmosphere: the disease being induced by the sudden application of cold to a heated body, or the reverse, but most frequently from wet feet, a sudden draught of cold air to the throat or nape of the neck, or even from a drink of cold water when the body is greatly heated.

The symptoms that first attract attention are, a great difficulty in swallowing, with heat, constriction, and dryness of the throat; the difficulty of swallowing rapidly increasing till at length that operation becomes impossible, every attempt ending in the ejection of the liquid through the nostrils. As the disease advances, a thickropy phlegm, of a yellowish colour, is thrown out from the part, and after much trouble expelled; at the same time sharp pains run through the jaws and ears, the voice in some cases is reduced to a whisper, and in all is thick and hoarse. From the first sensation of dryness in the throat, symptoms of fever show themselves in the constitution, such as heat, shivering, thirst, nausea, sickness, and headache. If the earlier remedies have failed to check the inflammation, the disease at the end of five, or sometimes seven days, runs into suppuration, and one or more abscesses are formed in the tonsils, which usually burst into the mouth; but when the enlargement impedes the respiration, the abscess must be opened, and the matter discharged.

Treatment.—When the symptoms are slight, a hot bran poultice, kept constantly to the throat, a mild aperient, and the immersion of the feet for a few minutes in hot water, is often all that is needed. In more severe cases, however, and where the constitution is robust, an emetic of ten grains of ipecacuanha and one grain tartar emetic, should be mixed in warm water and given directly,

to be followed in two hours by two compound colocynth pills, and half an ounce of Epsom salts, dissolved in a tumblerful of water an hour later. As soon as the emetic has ceased to act, the front of the throat should be rubbed with hartshorn and oil, and a hot bran poultice directly after applied round the throat. If the inflammatory action has set in strong, the emetic should be followed by bleeding from the arm, or it may be adopted at any subsequent stage of the treatment, and the poultice laid aside and a blister laid on the throat, should the urgency of the symptoms warrant its use. When the thick phlegm causes annoyance and cannot be expelled, a gargarre of warm vinegar and water should be employed to facilitate its removal. When suppuration sets in, which may be known by the throbbing in the part and frequent shivers, the hot poultice must be frequently changed, and the steam of hot water repeatedly inhaled, so as to promote the formation of the matter. In scrofulous constitutions the tonsils frequently become chronically enlarged, and upon any slight exposure to heat or cold commence a tardy process of suppuration. In such cases the treatment recommended for scrofula must be adopted both internally and locally.

2. *Putrid sore throat.*—This serious affection is not regarded as a substantive disease by many medical men, but rather as a grave consequence, or severe symptom of some other malady, such as malignant and scarlet fever, or typhus, in which diseases it is very often found as a terminating symptom. The symptoms of this disease commence with cold shivers, pain in the head, giddiness, stiffness in the muscles of the neck, flushed face, red or suffused eyes, sore throat, nausea, sickness, and sometimes vomiting. The pulse through all these progressive changes is small, quick, and feeble, and easily extinguished by pressure. The throat, when examined, presents an inflamed appearance, the redness deepening round the fauces, which, after a time, are dotted here and there by irregular brown spots. The tongue and gums are lined with a brown fur, while small vesicles filled with a transparent acrid fluid form on the inner lips, and in the nostrils, which, on breaking, excoriate the mouth and upper lip. Concurrent with this latter symptom, diarrhoea takes place, the constitutional disturbance or fever increases, and the strength of the patient sinks rapidly, the pulse still more rapid and feeble, is also intermittent, and with increased difficulty of breathing, there is often both delirium and coma. On the third or fourth day a scarlet rash not unfrequently breaks out over the chest and arms, which, on the sixth or seventh, peels off; the mouth is covered with a dark fur, a fetid odour issues from the throat, and the patient exhibits all the characteristics of putrid or malignant typhus. When the bright red appearance of the throat declines about the fifth day, and some return of appetite shows itself, a favourable termination may be hoped for, but when the inflammation passes rapidly into ulceration

tion and sloughing, and a flow of acrid saliva takes place from the mouth, with coma, the result of the case is regarded as extremely doubtful. *Treatment*.—The mode of treating this disease is precisely the same as for typhus, and consists in supporting the patient's strength by the most potent and energetic means, to give him strength to resist the first shock of the disease, and then, to facilitate the separation of the sloughs and support him over the reactionary stage. To fulfil the first intention, beef tea, jellies and a nutritious diet must be employed from the first, with doses of wine at regular intervals, and where the depression is great, brandy, either as a substitute or in addition; at the same time such a stimulating tonic as the following mixture should be administered every two hours, with, at bed-time when necessary, an addition to the last dose of fifteen or twenty drops of laudanum. Take of

Aromatic confection	1 drachm
Quinine	10 grains
Camphor water	5 ounces

to be rubbed smoothly in a mortar; then add

Compound tincture of bark	4 drachms
Compound tincture of cinnamon	4 drachms
Sal volatile	1 drachm

Mix and give a tablespoonful every two hours. Bottles of hot water should be kept to the feet, and a warm bran poultice placed round the throat. When the first stage of the disease has been passed, in addition to a nutritive diet, and a course of tonic stimulants, only less frequently administered, the throat must be gargled occasionally with the following gargles in succession. *Gargle No. 1*. Take of

Strong sage tea	1 pint
Vinegar	4 ounces

Mix. To be used every hour for three or four times on each occasion. *Gargle No. 2*. Boil

Bruised oak bark 2 ounces
in a pint of water for ten minutes; and add

Alum	2 drachms
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Mix. To be used as the former. *Gargle No. 3*. Take of

Infusion of rose leaves	1 pint
Sulphuric acid	30 drops

Mix. To be used as the above. *Gargle No. 4*. Take of

Capsicum vinegar	6 ounces
Tincture of catechu	4 drachms

Water, to make a pint. Mix, and use as the former. For the iector that arises from the sloughing, the mouth and throat are to be occasionally washed with a weak solution of chloride of lime, and, throughout the whole disease, the room should be frequently

sprinkled with aromatic vinegar, or the chloride of lime or tin.

Ordinary *sore throat* or hoarseness, when not a symptom of any more severe illness, may usually be easily disposed of by rubbing the throat freely with hartshorn and oil, and then enveloping the throat and neck in two or three folds of hot flannel, plunging the feet two or three times quickly in very hot water upon stepping into bed, and placing a piece of Spanish-juice in the mouth, allow it to dissolve there during sleep. When the sore throat is attended with cold chills, a dry hot skin and tendency to headache, before resorting to the liquorice and being well covered up with clothes, the patient should drink about half a pint of hot egg-flip made tolerably potent with a due proportion of gin or rum.—See *BRONCHITIS, MUMPS, SCROFULA, &c.*

THRUSH.—Of this family of birds, the song-thrush is the smallest and most attractive. It is found all over Europe, frequenting woods near streams and meadows, and is naturally somewhat shy and timid.



In confinement it may be lodged and treated like the blackbird, though less luxuriously. When wild, it lives on insects and berries; and in the cage, the two common pastes, oatmeal moistened with milk or water, or even bread moistened with water, have been found to answer. It requires a great deal of water for bathing and drinking. It is an excellent songster, but does not take kindly to the cage, and is not easily taught any artificial note. The male thrush may be distinguished from the female by a darker back, and a glossier appearance of the feathers. The belly, also, is white. Young birds are hatched about the middle of April, and should be kept very warm. They should be fed with raw meat, cut small, or bread mixed in milk with hemp-seed well bruised: when they are able to feed themselves give them lean meat, cut small, and mixed with bread or German paste. Keep them in a warm, dry, and sunny situation.

THRUSH, or *APHTHE*.—This is a disease of the mucous membrane of the mouth, stomach, and bowels; and when severe, may be traced throughout the whole alimentary canal. Though thrush may attack persons at any stage of life, it is still regarded as a disease more peculiarly incident to childhood and infancy; and is generally

induced by an abrupt change of diet, or some cause impairing the nutritive quality of the mother's milk, which produces this eruptive fever in the infant's digestive organs. The symptoms of thrush are heat, pain, and restlessness, followed by a series of small, raised, white spots, scattered over the mouth, tongue, and lips; sometimes there are but few, at others the whole mouth is studded with them. After a day or two they enlarge and become distended with a white puriform fluid; the eruption looking like a cross of minute beads: this completes the suppurating or second stage; after which, the vesicles proceed to ulceration, when they burst, discharge their fluid, and degenerate into small flat ulcers, causing throughout, but especially in this last stage, considerable irritation and pain. Treatment.—Having, if possible found the immediate cause of the disease, and if an improper food, removed it, the child must be carefully fed on a diet that in no way can irritate the tender and inflamed lining membrane; and, if necessary, a few spoonfuls of beef tea are to be given occasionally as a gentle stimulant. The medical treatment consists in the exhibition of the subjoined powders and mixture, and the employment, each evening, of the warm bath as a sedative to the restless child. Take of

Grey powder	8 grains
Seammony	6 grains
Rhubarb	3 grains

Mix and divide into nine powders for an infant from six to twelve months, giving one powder twice a day; into six powders for an infant from one to two years old, one twice a day; and into four powders for a child of three years, to be given in the same manner. Take of

Mucilage	$\frac{1}{2}$ ounce
Castor oil	2 drachms
Syrup	2 drachms

Mix well in a mortar, and add

Dill water	$\frac{1}{2}$ ounce
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Mix, and give a small teaspoonful twice a day to an infant from six to twelve months; three times a day to one of from one to two years; and every six hours to a child of three years old. Should the thrush have proceeded to ulceration, the mouth of the infant or child should be washed out by a lotion, made by dissolving a small quantity of alum or borax in water well sweetened with honey; and then, by tying a fold of lint to a piece of stick, and using it as a mop, to cleanse the mouth, having first well wetted it in the lotion.

THYME.—For this plant a poor, light, and dry soil is best. The situation cannot be too open. Thyme is propagated by rooted slips. To obtain slips, some old shoots may be divided into as many rooted portions as possible, or layers may be obtained by loosening the soil around them, and pegging the lateral shoots beneath the surface. They must be planted out from the beginning of February until the close of May, water and weeding being similarly required. In au-

tumn the decayed stalks should be cleared away, and a little fresh earth scattered and turned in among the stools. Although it is perennial, yet, after three or four years, thyme becomes stunted and unproductive, and consequently requires to be raised periodically from seed.

TIC DOULOUREUX.—This extremely painful affection of the nerves of the face, though receiving a special name, is in nothing different—except in the more acute violence of its pain—from the general or local forms of neuralgia; an inflamed or highly sensitive condition of a certain nerve or set of nerves, the result of constitutional disturbance, indigestion, or wounds in the course of one or other of the filaments of the nerves, being both the exciting cause and the disease itself. The causes that most frequently produce tic douloureux, are almost always some long standing functional derangement of the digestive organs, affections of the liver or of the kidneys, or alimentary canal. Next in frequency to these causes, is exposure to long sustained fatigue or sudden heat or cold, applied to the body, and sometimes sleeping in the sun. Tic has been frequently known to follow a halt, during a long march in India, and like tetanus too, tic douloureux sometimes supervenes upon wounds; and years after the injury, whether punctured, gunshot, or incised, has been healed, this agonizing disease will break out upon any sudden application of heat or cold to the body, or indeed after any deep emotion of the mind. Whatever may be the predisposing cause, the suffering and consequences induced bear no proportion in their intensity to the insignificance of the agents that give rise to the disease.

The symptoms of tic commence with a sudden plunging throbbing pain, darting as it were from over the eye, out of the cheek-bone, under the orbit, or from the side of the lower jaw, and spreading, if the paroxysms are long continued, over the whole of one side of the face from forehead to chin. The pain is so abrupt, peculiar, and intense, as almost to deprive the sufferer of breath in its first assault. These shooting, throbbing, and as they are justly called, agonizing pains continue for an uncertain time, from only a few minutes to one or more hours in duration, subsiding either by degrees or by an instant cessation of pain, and ending as abruptly as the first shock began. Tic douloureux is distinguished from toothache by the situation, and from rheumatism, the only other affection it can be confounded with, by the peculiarity and violence of the pain, the shortness of its duration, by always coming on in paroxysms, and by the absence of all swelling and redness over the part. A peculiarity of this disease is, that though sometimes induced by the slightest touch of the finger, or the faintest breath of cold air, at another time the part may be slapped or rubbed with impunity.

Treatment.—This consists, in the first instance, acting on the digestive organs, correcting the functional disturbance, and lastly by elevating the tone of the system, and en-

bling it to restore the irritated nerves to a pristine soundness, or if this cannot be done by constitutional means, by the employment of local remedies for that purpose. First, the best mode of acting on the digestive organs is by the steady employment of gentle aperients, care being taken to avoid any active or drastic purgative. For this purpose, a five grain compound rhubarb pill should be taken every night for several days till the bowels are brought into a healthy state, or a pill composed of equal parts of the compound rhubarb and colocynth pill may be substituted, where a little more active medicine is needed, the nightly dose being the same in this as the former. Secondly, to correct the functional disturbance, it, as most frequently, the result of indigestion, two tablespoonfuls of the following mixture are to be taken every four or six hours. Take of

Hops	2 drachms
Cascara, bruised . . .	1 drachm
Cloves, bruised	2 drachms

Infuse in a pint of boiling water for twelve hours; add

Carbonate of potass . .	2 drachms
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Dissolve, and strain for use. Or where the stomach is cold and weak, as in advanced life, let the patient take a teaspoonful of *Gregory's powder* in a little peppermint water twice or three times a day. Thirdly, to elevate the tone of the system, the body must be braced by tonics, which may be effected by either of the two following forms of medicine. Take of

Carbonate of iron . .	2 drachms
Sulphate of quinine . .	18 grains

Mix, and divide into six powders, one to be taken three times a day; or, take of

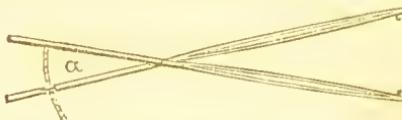
Infusion of quassia . .	8 onuces
Quinine	1 scruple
Diluted sulphuric acid . .	30 drops

Dissolve; two tablespoonfuls to be taken three times a day. Accompanying the tonic course, the patient should take several glasses of wine during the day, or else an equivalent of the best stout, and should lie on a liberal dietary, taking as much exercise as is compatible with age and strength. When, in despite of all such remedial means, the paroxysms of pain continue, it often becomes necessary to relieve any local congestion that may exist around the nerve, either by the application of five or six leeches over the source of the pain, or by the employment of cupping glasses or a mustard plaster. In case of both of these means failing, a blister may be applied behind the ear of the affected side, and in extreme cases a blister down the spine at the nape of the neck, which must be converted into an issue, and kept open for a week or two. It is seldom, however, that this has to be resorted to, the disease, however intense the paroxysms, generally yielding to any one course if steadily and judiciously carried through, unless, indeed, the disease is the consequence of a system shattered by wounds, campaigns,

and climate, then, and only under such unfavourable circumstances, *tic douloureux* becomes most formidable. The discovery of chloroform has, however, placed in the physician's hand a boon that in a disease of this nature is in truth a very blessing to suffering nature, and may be employed in conditions of system and under circumstances where opium, morphia, brandy, and both narcotics and stimulants are inadmissible, or, from the necessary dose to effect relief, would be dangerous. —See NEURALGIA.

TILES.—These form a heavier covering for a roof than slates, and are now employed for offices and houses of an inferior class. There are two kinds of tiles in common use, plain tiles and pantiles. Plain tiles are of the same form as slates, but are laid on laths of oak or fir, and bedded and pointed with mortar. The pitch of the roof requires to be forty-five degrees, and the tiles require frequent pointing. Pantiles are curved, and are laid on each other dry: they are seldom used except in cow-houses, sheds, and other outbuildings. They do not form so warm a roof as plain tiles, and are more liable to be deranged. Common tiles are not nearly so durable as slates, being much affected by the frost; but when glazed, as they sometimes are, with a dark glaze, they are very durable. When the red colour of tiles is objectionable, they may be covered with a coat of anti-corrosive paint.

TIMBER MEASURER.—An implement employed for taking the dimensions of standing timber without climbing the tree. The measurer illustrated in the annexed figure, is composed of two pieces of deal, about thirteen feet long, with a brass limb



or index, on which are engraved figures denoting the quarter-girth in feet and inches. Raising the instrument, the index end is taken hold of, and the other applied to that part of the trunk where the girth is to be taken, opening it so wide as just to touch at the same time both sides of it, keeping the graduated index uppermost, on which the quarter-girth will be shown, allowing one inch in thirteen for the bark. *For taking the height of a tree.* Rods of deal or bamboo, seven feet long, made so as to fit into ferrules at the end of each other, tapering, as in a fishing-rod, may be used. Five of them, with feet marked on them, would enable a person quickly to measure the height of a trunk of not more than forty feet, as he would reach above seven feet. A measuring staff, for taking the height of trees, may also be made as follows:—Divide a square staff of seven or eight feet in length, into feet and inches, for the convenience of measuring the distance between the places of observation and the

tree, or taking other dimensions. Upon one side of this staff, at a commodious distance from the bottom, fix a rectangular board, the length of which is exactly equal to twice its breadth, which breadth may be about four or five inches. At each corner of the lower extremities of this board fix sights or small iron pins, as also in the centre of the left side, and at the top left corner. Thus, when the top of a tree is seen through the sights, the tree's height is equal to the distance from its bottom added to the height of your eye; but if seen through the sights obliquely, its height is equal to twice the distance from the bottom, adding the same height as before. In making an observation with this instrument, it ought to be fixed perpendicularly to the horizon, which may be done by means of a plummet suspended from the centre of the top of the board. In taking the altitude of a tree growing upon an inclined plane, the measurer must endeavour to make his observations from a place upon a level with the bottom of the tree. If this cannot be done, direct the horizontal sights towards the lower part of the tree, and let an assistant make a mark upon it; then find the height of the tree above this mark as before, to which add the distance of the mark from the ground, which must, in this case, be considered the height of the eye, and the sum will be the height of the tree. Another mode of taking the height of trees is, by means of an instrument shaped like a gun stock, the end being adapted for the shoulder, the muzzle or line, for taking a sight at the top of a tree, and the square being marked or cut on the board at the farther extremity.

TIME, ECONOMY OF.—Book: *Life Doubled by the Economy of Time*, 1s. 6d.

TIME-PIECE.—See CLOCK.

TIN.—This metal is of a silver-white colour, very soft, and so malleable that it may be reduced into leaves 1-1000th of an inch thick, called tin-foil. It suffers but little change by exposure to the air. Its tenacity is but slight, so that a wire, of 1-15th of an inch in diameter, is capable of supporting only about 3lbs.; a bar a quarter of an inch in diameter was broken by 296lbs. weight. Tin is inelastic, but very flexible, and when bent, it produces a peculiar crackling noise. When rubbed, it imparts to the fingers a peculiar smell, which remains for a considerable time. Its specific gravity is about 7.29; at 442° Fahr., it fuses, and, if exposed at the same time to the air, its surface is tarnished by oxidation, and eventually a gray powder is formed. When heated to whiteness, it takes fire, and burns with a white flame, and is converted into peroxide of tin. If slowly cooled after fusion, it exhibits a crystalline appearance on solidifying. The combination which tin forms with oxygen, chlorine, sulphur, and iodine, and those which the oxide of tin forms with the various acids, are valuable in calico printing and many other of the practical arts. Most of the malleable metals are rendered brittle by alloying with tin. It combines readily with potassium and

sodium, forming brilliant white alloys, which are less fusible than tin. With arsenic it forms a metallic mass which is much whiter, harder, and more sonorous than pure tin. With antimony, tin forms a white, hard, and sonorous alloy. Bismuth forms with tin an alloy which is more fusible than either of the metals separately, a mixture of equal weights melting at 212°. This compound is bard and brittle. Copper and tin form alloys which are well known and highly useful—hell-metal and bronze. With mercury tin readily amalgamates, and the compound is used for silvering mirrors. Tin forms with iron white compounds, which are more or less fusible according to the proportion of iron they contain. Tin plate is, of all the alloys of tin, the most useful, and the preparations of this and of pewter are the most extensive applications of this very valuable metal.

TIN COVERS, TO CLEAN.—Get the finest whiting, which is only sold in large cakes, the small being mixed with sand; mix a little of it powdered with a small drop of sweet oil, and rub well, and wipe clean; then dust over them some dry whiting in a muslin bag, and rub bright with dry leather. The last is to prevent rust, which the cook must be careful to guard against by wiping them dry, and putting them by the fire when they come from the parlour; for, if but once hung up without the steam will rust the inside.

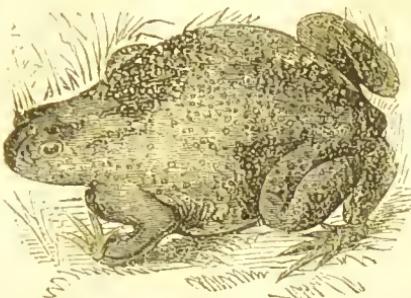
TIPPERARY CAKE.—Wash a pound of butter in a little orange-flower water, and beat it to a cream; then mix into it by degrees a pound and a half of powdered loaf sugar, and sixteen eggs well beaten; add a pound of well-dried flour, half a pound of sweet almonds, blanched and pounded in a little rose-water, and two ounces of caraway-seeds; beat the whole well together for half an hour, pour it into a buttered tin lined with buttered paper, and bake in a quick oven for two hours.

Tipperary Butter. 1lb.; sugar, 1½lb.; eggs, 16; flour, 1lb.; almonds, ½lb.; caraway seeds, 2ozs.

TIPSY BREAD.—Pare off the crust, and cut into thin round slices of four or five inches, the crumb of a twopenny or threepenny roll; spread over each bit raspberry or strawberry jam, and place the slices, one over the other, pretty high in a glass dish, and pour over them as much sherry sweetened with sugar as the bread will soak up; stick round the sides, and over the top, blanched sweet almonds, cut like straws, and pour a custard round it. It may be made the day before, or two or three hours before dinner, and with the crumb of bread.

TIPSY CAKE.—Pour over a sponge cake, made in the form of a porcupine, as much white wine as it will absorb, and stick it all over with blanched sweet almonds, cut in the form of straws; or, pour wine in the same manner over a thick slice of sponge cake, cover the top of it with preserved strawberries or raspberries, and stick all round it.

TOAD.—This animal, although generally regarded with fear and aversion, is in reality perfectly harmless. The body is of a dull hue, its shape awkward, and its movements



apparently difficult. It issues from its concealment at twilight in search of food, which consists of insects, worms, and slugs. On this account, this animal is of the greatest service in gardens, and especially in greenhouses and other horticultural structures.

TOAD-IN-A-HOLE.—This is an economical dish; and if well dressed, is very good. Make a common batter of eggs, flour, and milk, but rather thicker than usual, and put in the centre of it a fowl, boned and stuffed with foremeat; let it be entirely covered with the batter, then bake it. Two pounds of beef, or any kind of meat, may be seasoned and dressed in the same manner.

TOAST AND CHEESE.—Take some old Cheshire, with a lump of butter, and the yolk of a hard-boiled egg; beat them into a paste, which spread upon slices of buttered toast, and hold a salamander over them until the paste is browned and melted. The paste may also be spread between thin slices of bread and butter, and eaten cold as a sandwich.

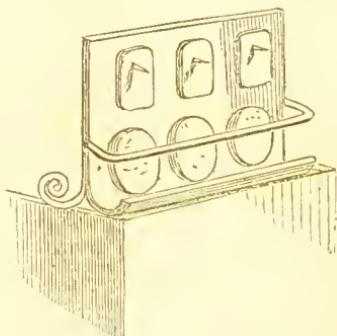
TOAST AND WATER.—Take a slice of fine and stale bread, cut very thin—as thin as toast is ever cut—and let it be carefully toasted on both sides, until it be completely browned all over; but not blackened nor burned in any way. Put this into a common deep stone or china jug, and pour over it from the teakettle as much clean boiling water as you wish to make into drink. Much depends on the water being actually in a boiling state. Cover the jug with a saucer or plate, and let the drink cool until it be quite cold: it is then fit to be used. The fresher it is made the better, and, of course, the more agreeable. The above will be found a pleasant, light, and highly diuretic drink. It is a most excellent drink at meals, and may be used in preference to fermented liquors in the summer time, if more agreeable to the drinker.

TOAST BUTTERED.—The bread should be cut thicker than for dry toast, from a square loaf, taking care to toast the whole round. When the first slice is toasted,

it should be buttered on one side, then cut into quarters and placed upon the plate before the fire, while the next slice is toasted, buttered, and cut, when it also must be placed upon the first piece; and so on for as many slices as are required. The crust should properly be cut off before the bread is toasted, and carefully put away, as it will make a very good bread pudding, and ought not to be wasted.

TOAST DRY.—Cut very thin slices of bread from a loaf not less than two days baked; put either one or two at a time on the toasting-fork, taking care not to hold them too near the fire; they should be just warmed on each side, then turned, and, when sufficiently done on one side, they should be turned again; and when they are thoroughly toasted, they should be either placed upright on a plate, one against the other, or put in the toast-rack; but they should be kept near the fire until required for the table. Toast should never be made long before it is sent to table, or it becomes tough and leathery; some people cut off the crust.

TOASTER.—A culinary utensil, as seen in the engraving, placed upon a stand of



strong wire, that hooks on to the bars of a grate, and made either loose, or to slide backwards and forwards on the stand; this will dress bread, cheese, and small pieces of meat.

TOBACCO, ADULTERATION OF.—The following are the substances which have either been discovered or have been stated on good authority to have been employed in the adulteration of tobacco, either in the form of cut or roll tobacco, cigars, or snuff. They may be divided, first, into vegetable substances not tobacco, as the leaves of the dock, rhubarb, coltsfoot, cabbage, potato, &c., malt Cummings, that is, the roots of germinating malt; peat, which consists chiefly of decayed moss; seaweed, roasted chicory root, bran, catechu, and oakum. Secondly, sub-saccharine substances, as cane-sugar, treacle, honey, beet-root dregs. Thirdly, into salts and earths, as nitre, common salt, sal ammoniae, nitrate of ammonia, carbonate of ammonia, potash, soda,

and lime-water; yellow ochre, umber, fuller's earth, Venetian red, sand, chromate of lead. The detection of some of the above substances is easy enough, but others present great difficulties. The method of examination to be pursued is as follows:—A certain quantity of each tobacco (100 grains) is to be weighed immediately after it is purchased, before it has had time to lose weight by evaporation, and thoroughly dried at a temperature of about one hundred degrees of Fahrenheit. It is then to be re-weighed: the loss or per-centge of water is by this means ascertained. Each sample may next be thoroughly examined by means of a microscope, in order to ascertain whether there be any foreign vegetable substance present; if it contain any of those enumerated above, in ever so fine a state of powder, and even in the smallest quantities, they may be detected with the greatest certainty with the aid of the microscope. The structure of the tobacco leaf differs materially from that of other leaves, and may thus be readily distinguished. With regard to the method of proceeding for the detection of grape-sugar or glucose in tobacco, the following simple method will be found efficient. Take one thousand grains of a solution of tobacco, containing two grains of the dried extract to one ounce of water; add four drachms of liquor potassæ, boil, filter, and then add about four hundred grains of Fehling's test liquid, and heat to boiling; if any glucose be present, the red oxide of copper will be thrown down; collect and thoroughly wash the precipitate in order to free it from any albumen that may be present, weigh and calculate it as before.

TOBACCO, GROWTH AND PREPARATION OF.—There are various kinds of dried leaf, or manufactured tobacco, distinguished by the name of the country in which they are grown, as well as by differences of colour and quality, arising chiefly from soil and climate. *Virginian tobacco* is the strongest kind, and is best adapted for smoking in pipes and for snuffs. This tobacco will retain more moisture than almost any other kind. *Maryland* is paler in colour and milder than the former, the pale cinnamon is the best, the "scrubs" the commonest. *Kentucky* possesses an intermediate strength between the two last-named tobaccos. *Orinoko* is of a yellow colour, and very mild and delicate. *Cuba* is also a mild tobacco, and the best kind emits a peculiarly musky or spicy odour. *St. Domingo* is of inferior quality. *Dutch* is very mild and deficient in flavour. *Turkey* and *Latakia* are mild and highly prized tobaccos. *Persian* is delicate and fragrant. All manufactured tobaccos may be referred to one or other of the four following forms or kinds:—In the first kind the leaves are cut into shreds; to this all the different varieties of *cut tobacco* belong. In the second, the leaves are twisted or spun into a kind of rope; this includes the various kinds of *rolled*, *spun*, or *twist tobacco*. In the third, the steeped leaves are folded one over the other, so as to form *cigars*, *cheroots*, &c. In the fourth form, the leaves are reduced to powder constituting snuff. The different varieties

of roll and cut tobacco are *Shag*, *Returns*, and *Bird's-eye*; other less common kinds are *Maryland*, *Cnaster*, *Orinoko*, *Turkey*, *Persian*, and *Varina*. *Shag* is prepared chiefly from *Virginia* and *Kentucky* tobacco. *Returns* is a light-coloured mild tobacco, made up of small pieces of broken leaves, and the dust and siftings produced in the various processes of manufacture. *Bird's-eye* differs from other varieties, in containing the mid-ribs of the leaves, the transverse slices of which have been fancifully compared to the eyes of birds. The principal kinds of roll tobacco are *Pigtail*, *Bogie*, *Alloa*, *Negro-head*, and *Cavendish*. The three first are used entirely for chewing, and are distinguished by the difference in the thickness of the ropes, *Alloa* being the thinnest and *Bogie* the thickest. *Negro-head* and *Cavendish* are used nearly exclusively for smoking. *Negro-head* is manufactured in the form of a thickish rope, it also sometimes consists of two ropes coiled together in short pieces. *Cavendish* is made into small and square flat cakes, about an inch and a half wide by five inches long.

TOBACCO SMOKING.—The effect that smoking of tobacco has upon the health, has been one of those vexed questions which have provoked a variety of opinions, according to the peculiar views held by the disputant. The most obvious injury which is apt to result from smoking, more or less, according to the extent in which it is indulged, is disorder and irritation of the digestive organs, frequently accompanied with depression of spirits, and at times with extreme nervous irritability, the latter being more especially manifested in an inveterate smoker, if, from illness or any cause, his habitual indulgence is interfered with. The occurrence of cancer in those who habitually smoke from a short pipe, and the injury to the teeth from smoking, and especially their discoloration, are notorious; further, there is a tendency to disease of the throat and air passages when this indulgence is followed to any great extent. Some persons, when smoking, expectorate freely, while others abstain from doing so. There cannot be a doubt that the unnatural degree of expectoration excited by smoking, has an injurious tendency on the health, as the saliva that is parted with is necessary for the purpose of promoting digestion, and the digestive organs being deprived of this essential ingredient, do not perform their functions with that regularity they otherwise would. Two of the unpleasant effects attending tobacco smoking, are the unpleasant taste it leaves in the mouth, and the disagreeable odour it imparts to the breath; and to remedy this as much as possible, the mouth should be freely washed with cold water immediately after smoking. The objections to smoking tobacco as a mere habit, do not of course extend to its employment as a remedy for disease, particularly of an asthmatic character, in which some persons derive the greatest benefit from its moderate use. In any case in which tobacco has produced low symptoms in an alarming degree, its use should be immediately discontinued.—See PIPE SMOKING.

TOFFY.—Put into a brass skillet, or small preserving-pau, three ounces of very fresh butter, and as soon as it is just melted, add a pound of brown sugar of moderate quality; keep these stirred gently over a very clear fire for about fifteen minutes, or until a little of the mixture, dropped into a basin of cold water, breaks clean between the teeth without sticking to them. When it is boiled to this point, it must be poured out immediately, or it will burn. The grated rind of lemon, added when the toffy is half done, improves it much; or a small teaspoonful of powdered ginger, moistened with a little of the other ingredients as soon as the sugar is dissolved, and then stirred to the whole, will vary it pleasantly to many tastes. The real Everton toffy is made with a much larger proportion of butter; but it is the less wholesome on that very account. If dropped upon dishes first rubbed with a buttered paper, the toffy when cold can be raised from them easily. Butter, three ounces; sugar, one pound; fifteen to eighteen minutes; or, sugar, one pound; butter, five ounces; almonds, two ounces; twenty to thirty minutes. Boil together a pound of sugar and five ounces of butter for twenty minutes; then stir in two ounces of almonds blanched, divided, and thoroughly dried in a slow oven, or before the fire. Let the toffy boil after they are added till it crackles when dropped into cold water, and snaps between the teeth without sticking.

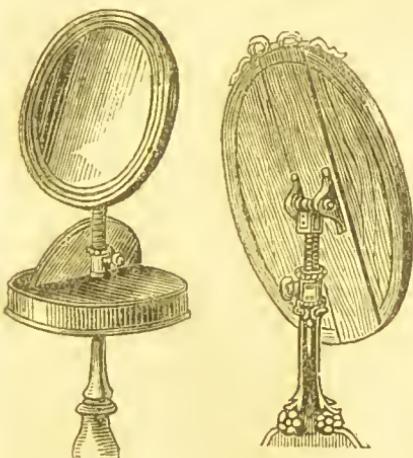
TOILETTE GLASS.—The toilette glasses in common use are those termed swing glasses, from their being moveable to any angle in a frame. The cheval glass is one which stands on the floor for viewing the

depressed, and also swivelled either horizontally or vertically, or both, so as to place and secure them in any desired position. The pillar which supports the glass is hollow, and has a square or round bar or rod, which slides vertically therein, being provided with a toothed rack and a small pinion, which is turned by a handle or knob. The upper extremity of this rack bar carries a boss, which is capable of being turned upon its vertical axis, and the upper part of this boss carries a horizontal axle, to which are attached two scrolls or brackets, which are screwed or fixed to the back of the looking-glass. Thus it will be seen that the glass may be turned or swivelled either on its horizontal or vertical axis, or both, and also raised or depressed by means of the rack. The pinion is provided with a ratchet wheel and fall, to support the glass when raised to the required position. The horizontal axis is provided with a clip and tightening screw. The same plan of suspending the glass is applied to gentlemen's mirrors, a small circular box containing the shaving-apparatus, &c. This glass may, by a little management, be used also for the ladies' toilette, to show the back of the head while dressing before the ordinary mirror. The advantages of this invention are, the facility with which the glasses may be moved in any direction, and their firmness in whatever position they are placed. To this it may be added that the designs of the stands and frames are of the most elegant description. The same kind of stand is also applicable to fire-screens and easels, and other articles where facility of adjustment is desirable.

TOMATO.—The tomato, which is used as a condiment or sance, is the fruit of one among many species of solamine. It is a native of South America; but it is also well known and much cultivated in the United States, France, Germany, and Italy. The fruit is about the size of a golden pippin; it has an acid flavour, and is used as an addition to soups and sauces, as a preserve, and as a pickle. It is not much used in England; but in Italy whole fields are covered with it, and scarcely a dish is served up into which it does not enter as an ingredient.

TOMATO KETCHUP.—Cut half a peck of ripe tomatos into quarters, lay them on dishes, and sprinkle over them half a pound of salt. The next day, drain the juice from them through a hair sieve into a stewpan, and boil it for half an hour, with three dozen of small capsicums and half a pound of shallots; then add the tomatos, which should be ready pulped through a strainer. Boil the whole for thirty minutes longer; have some clean wide-necked bottles kept warm by the fire; fill them with the ketchup while it is quite hot; cork and dip the necks into melted bottle-resin or cement.

TOMATO SAUCE.—Take off the stalks, halve the tomatos, and gently squeeze out the seeds and watery pulp; then stew them softly with a few spoonfuls of gravy, or of strong broth, until they are quite melted. Press the whole through a hair sieve, and



whole person, with lights on each side. An improved stand has been invented and manufactured by Mr. Henry Dolman, of 10, Nelson Street, Greenwich, which is intended to allow of looking-glasses being either elevated or

heat it afresh with a little additional gravy, should it be too thick, and some cayenne and salt. Serve it very hot. For a large tureen of this sauce, increase the proportions; and should it be at first too liquid, reduce it by quick boiling. When neither gravy nor broth is at hand, the tomatoes may be stewed perfectly tender, but very gently, in a couple of ounces of butter, with some cayenne and salt only, or with the addition of a very little finely minced onion; then rubbed through a sieve and liquefied, and served without any addition, or with only that of a teaspoonful of chili vinegar; or, when the colour is not a principal consideration, with a few spoonfuls of rich cream, smoothly mixed with a little flour, to prevent it curdling. The sauce must be stirred without ceasing, should the last be added, and boiled for four or five minutes. Or, stew very gently a dozen fine red tomatoes, prepared as for the preceding receipt, with two or three sliced shallots, four or five chilies, or a capsicum or two, or (in lieu of either, with a quarter of a teaspoonful of cayenne pepper) a few small dice of lean ham, and half a cupful of rich gravy. Stir these often, and, when the tomatoes are reduced quite to a smooth pulp, rub them through a sieve; put them into a clean saucepan, with a few spoonfuls more of rich gravy, afterwards; add salt, if needed; boil the sauce, stirring it well for ten minutes, and serve it very hot. When the gravy is exceedingly good and highly flavoured, the ham may be omitted. A dozen small mushrooms, nicely cleaned, may also be sliced and stewed with the tomatoes instead of the shallots, when their flavour is preferred, as they may be added with them. The exact proportion of liquid used is immaterial, for, should the sauce be too thin, it may be reduced by rapid boiling, and diluted with more gravy if too thick.

TOMATOS FORCED. — Cut the stem quite close, slice off the tops of eight fine tomatoes, and scoop out the inside; press the pulp through a sieve, and mix with it one ounce of fine crumbs of bread, one of butter broken very small, some pepper or cayenne, and salt. Fill the tomatoes with the mixture, and bake them for ten minutes in a moderate oven; serve them with brown gravy in a dish. A few small mushrooms stewed tender in a little butter, then mixed and added to the tomatoes' pulp, will very much improve this receipt. Bake for ten minutes.

TOMATOS PICKLED. — For this purpose the small round sort are the best, and each one should be pricked with a fork, to allow some of the juice to exude. Put them into a deep earthen vessel, sprinkle salt between every layer, and leave them for three days covered; then wash off the salt, and cover them with a pickle of cold vinegar, to which add the juice, mixed with a handful of mustard-seed, and an ounce of each of cloves and white pepper for every peck of tomatoes.

TOMATOS ROAST. — Select them nearly of the same size, take off the stalks, and

roast them gently in a Dutch oven; or, if more convenient, place them at the edge of the dripping-pan, taking care that no fat from the joint shall fall upon them, and keeping them turned, that they may be equally done. From ten to fourteen minutes will roast them.

TOMATOS STEWED. — Arrange them in a single layer, and pour to them as much gravy as will reach to half their height; stew them very softly until the under sides are done, then turn, and finish stewing them. Thicken the gravy with a little arrowroot and cream, or with flour and butter, and serve it round them.

TONGUE. — The tongue is the index of health, the thermometer of the physical stamina of the body; and, according to the aspect that this organ assumes, physicians are in the habit of deciding the gravity and nature of the disease with which the patient is at the time suffering or threatened. The coating, as it is called, of the tongue, serves to point out to the experienced observer the particular structure in which the disease is situated. Sometimes the organ is covered with a dark brown fur; at others, it is lined with white, as if loaded with cream; again, it will be dry, pale, and hard or red, swollen and moist, with raised papillæ; but as these changes may vary even during a few hours, it is difficult to make the subject intelligible to those not familiar with the changes that occur in the organ itself. The tongue in a state of health should be clear of all coating or fur, of a natural brown colour, well but not excessively moistened with saliva, and free from all unpleasant taste or clamminess. Still, a slight coating in the morning, or at certain times of the day, is not to be attributed to disease, but rather to a participation in the function of digestion going on in the stomach, or an exudation thrown out during sleep, and unremoved by the reactionary power of muscular exertion. The tongue, like other organs of the body, is liable to disease, such as hypertrophy or enlargement; atrophy or "wasting" of the organ; cancer, ulceration, crackling, or tumours forming in the centre, on the tip, or edges; or a small, irritable, and extremely painful species of ulcer, liable to form on any part of the tongue, lips, gums, or mouth, and known as aphthæ; a small, circumscribed, ulcerous sore, extremely painful, and exactly resembling thrush, only that they seldom appear in groups or clusters, and seldom show more than one or two at a time. With a few exceptions, all the diseases of the tongue proceed from some derangement of the digestive organs, and nearly all of them are to be cured by a course of alterative and cooling medicines, such as an equal mixture of blue and colocynthi pill, and a small dose of Epsom salts, or the phosphate of soda. When the aphthous ulcers are tedious, the most expeditious practice, in addition to the alterative course, is to touch each, as it makes its first appearance as a pimple, with blue stone or caustic. Infants are occasionally born with a restricted

tongue, or the organ so hampered that it cannot with comfort or ease keep hold of the mother's nipple, and consequently is debarred from obtaining an adequate supply of milk. Those children who make a clacking noise with their mouths, and frequently drop the nipple, are said to be *tongue tied*; or, in other words, the fold of the mucous membrane being beneath the tongue, and sometimes extending to the tip, binds the organ so tightly as to prevent the free use or motion of it, and as such a malformation would greatly impede articulation and speech, the surgeon is early called upon to prevent so unpleasant a catastrophe, which is very easily and very quickly effected by transfixing the fine membrane that binds the tongue to the mouth, with a pair of short and delicate scissors, and cutting the *frenum*, or bridle, as it is called, from *within*, out. Simple as the operation is, it requires to be performed with a firm, light, and a steady hand, as the slightest injury to the adjacent vein might be fatal. Sometimes, indeed, the tongue is tied down to the mouth by a thick fleshy band, instead of the mere fold of tissue-like membrane, in which case professional advice must be sought, and surgical assistance procured to remove or cut through the obstruction.

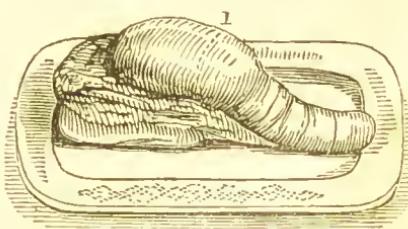
TONGUE BOILED.—When taken fresh from the pickle, they require no soaking, unless they should have remained in it much beyond the usual time, or have been cured with a more than common proportion of salt; but when they have been smoked and highly dried, they should be laid for two or three hours into cold, and as much longer into tepid water, before they are dressed. If extremely dry, ten or twelve hours must be allowed to soften them, and they should always be brought very slowly to boil. Two or three carrots and a large bunch of savoury herbs, added after the scum is cleared off, will improve them. They should be simmered until they are extremely tender, when the skin will peel from them easily. A highly dried tongue of moderate size will usually require from three and a half to four hours' boiling; an unsmoked one, about an hour less; and for one which has not been salted at all, a shorter time will suffice.

TONGUE PICKLED.—To three gallons of spring water add six pounds of common salt, two pounds of bay salt, two pounds of common loaf sugar, and two ounces of saltpetre. Boil these over a gentle fire, and be careful to take off all the scum as it rises; when quite cold, it will be fit for use. Rub the tongue to be cured with fine salt, and let it drain for a day, in order to free it from the blood; then immerse it in the brine, taking care that every part of it shall be covered. The tongues should not remain more than from three to five days in the pickle. When the pickle has been in use for about three months, boil it up again gently and take the scum carefully off; add to it three pounds of common salt, four ounces of sugar, and one of saltpetre. It will remain good for many months.

TONGUE POTIED.—Mix an ounce of saltpetre and four ounces of brown sugar; rub a neat's tongue well with it, and let it lie in it for two days. Then boil it till quite tender, and take off the skin and side bits. Cut the tongue in very thin slices: beat it in a marble mortar, with a pound of clarified butter; season with pepper, salt, and mace, and pot as usual.

TONGUE STEWED.—After the tongue has been soaked, trimmed, and washed with extreme nicety, lay it into a vessel of fitting size, and place round it three or four pounds of the neck or of any other lean cuttings of beef, with some bones of veal, and pour in sufficient cold water to keep it covered until it is done; or instead of this, use strong unseasoned beef broth, made with the shin and any other odd bits or bones of veal which may be handy. Let the tongue be brought to boil very gradually, that it may be plump and tender. Remove the scum when it first rises, and when it is quite cleared off add a large faggot of parsley, thyme, and winter savoury, three carrots, a small onion, and one mild turnip. After three hours and a half of gentle simmering, probe the tongue, and if sufficiently done, peel off the skin and serve it quickly. If not wanted hot for table, lay it upon a clean board or trencher, and fasten it down to it by passing a fork through the root, and a smaller one through the tip, drawing the tongue straight with the latter before it is fixed in the board; let it remain thus until it is quite cold. Where expense is not regarded, three or four pounds of veal may be added to the beef in this receipt, or the tongue may be stewed in a prepared gravy made with equal parts of beef and veal, and vegetables as above, but without salt; this may afterwards be converted into excellent soups. A fresh or an unsmoked tongue may be dressed in this way, but will require less time; for the former, salt must be added to the gravy.

TONGUE, TO CARVE.—The middle slice of the tongue is considered the best. The tongue should be cut across at the line 1,



nearly through the middle, and thin slices taken from each side; a portion of the fat, which is situated at the root of the tongue, being assisted with each portion.

TONGUE, WITH CUCUMBERS.—Scald the tongue, to whiten it, for half an hour; when it is cold, lard it with bacon, seasoned with pepper, spices, parsley, and chives chopped. Stew the tongue with a seasoning of fine herbs, carrots, onions, different kinds of spiccs, and some stock; let it stew

slowly for hours. At the moment you serve, skin the tongue, and have a sauce of coulis thickened, in which put gherkins, sliced round.

TOOTHACHE. — There are few of the physical sufferings of life more dreaded than this comparatively insignificant misfortune. Toothache is too well known to require any description; all that is necessary is to point out how the tooth becomes affected, and recapitulate the best remedies both for its removal and cure. Each jaw, on either side, receives, through a small hole, a minute branch of a *sentient* nerve, which, running through the substance of the bone, gives off a small twig to each tooth as it passes on, till, finally escaping from the jaw, on each side of the centre of the upper and lower jaw, it becomes expended on both the lips. Each tooth is thus supplied with a small nerve, which endows it with life and sensation. Owing to inattention to the state of the stomach, the varieties of food and indiscrimination with which they are eaten, and neglect in keeping the mouth clean, the teeth become remarkably prone to decay—a disease which they sometimes acquire in a singularly short space of time—the tooth generally first decaying from the top downwards. When once the outer crust or enamel has been eaten through, the bony structure beneath does not long preserve its integrity, when the nerve exposed to the air, and often irritated by hard substances and fragments of food, is at once attacked by that mitigated form of neuralgia, known familiarly as the toothache, and which, when attacking the face, is denominated *tic douloureux*. As the admission of cold air, and hot food or drink, are the main causes that keep up the excessive pain, the aperture should always be closed up, and the air and all foreign substances carefully excluded. For this purpose a cement should be used, which, if employed with care, and when the hollow has been previously cleared out, will render the tooth serviceable for several years. Where this, however, cannot be effected, in consequence of the size of the opening, and neither cleaning the teeth nor aperient medicine relieves the pain, the tooth had better be extracted before it crumbles too far away to admit of its being drawn at all. Tobacco is occasionally of service; but, as few stomachs can endure the remedy, it is seldom employed. A small pill, made of a grain of opium, placed in the hollow tooth, will most frequently allay the acute pain, and finally end the paroxysm. Some, more partial to the stimulating process, use a few drops of creosote, a little piece of cotton wetted in tincture of myrrh, or friar's balsam, spirits of camphor or turpentine; but, next to the opium in the tooth, the best external remedy is a small bit of camphor inserted in the aperture. The modern remedy of chloroform, however, has superseded most other remedies, for, as either applied or inhaled, it ensures relief.

TOOTH DRAWING. — To be able to draw a tooth moderately well is an accomplishment which will stand a person in good stead, in many situations of life, where

the services of a properly qualified person cannot be conveniently obtained. The operation is to be performed according to the following instructions:—*The front and the eye teeth are extracted with straight forceps, one blade of which is placed at the back of the tooth, and the other blade in front, and the extremities of the instrument so disposed as to clip the tooth just at that part where it enters the gum.* The right hand grasps the handles of the forceps, whilst the forefinger is at the same time thrust far in between them, to prevent too great pressure being made, and the tooth snapped off. If it be an upper tooth, the operator steadies the patient's head by placing it beneath his left arm, and then pulls downwards, giving the tooth a hoist at the same time, by which action it is readily drawn, if the pull be steadily made. If it be a lower tooth, the operator steadies the head in the same way, but, with the thumb of his left hand on the sound teeth, presses the jaw down, whilst his right hand pulls upwards, twisting the tooth as it is being pulled. *Drawing a back tooth is a more difficult and complicated business, and is generally performed with an instrument called a key.* The free end of the stem of the key has a deep solid lip, which is called the holster, and on the top of this moves a shortly-curved iron claw, which, when the handle of the instrument is twisted, acts in a powerful manner, and drags the tooth out of its socket. If an upper back tooth is to be drawn, the operator has most power and control, and can see best what he is about, if he set the patient on the floor, throw his head far back, and fix it between his knees. If it be the lower tooth, the patient may be placed in a chair. In either case, the mouth must be held wide open. The operator now introduces the key, with the claw thrown back, into the mouth, within the range of the teeth, and places the bolster of the instrument against the gum of the tooth to be pulled out; he then turns the claw across the top of the tooth, and lets it drop till it rests on the outside of the tooth just where it sinks into the gum. Here the operator steadies the claw with the forefinger of the left hand, and grasping the handle of the instrument, as he would the handle of a corkscrew when pulling out a cork, he twists it from without inwards, and as he does this, the claw acting as a lever, and the bolster as the fulcrum, the tooth is lifted out of the socket. Another mode of performing this operation is to draw the tooth outwards, in which case the bolster must be placed on the outside of the gum, and the claw made to clasp the inside, after which the handle of the instrument is twisted outwards. One important caution is necessary to be observed, namely, to be sure, when fixing the claw, to clasp the right tooth, and take care it does not slip on to the next, or a sound serviceable tooth may be drawn, and the affected one left behind.

TOOTH PASTE. — Mix honey with finely powdered charcoal, and use the paste as a dentifrice.

TOOTHPICK.—An instrument for cleansing the spaces between the teeth. The best and cheapest are made from a piece of quill. This ought to be passed round and between all the teeth after each meal, which will serve to keep off the tendency to form tartar. At night, a brush with water only may be used with advantage; and where there is a strong tendency to decay between the roots, a piece of strong silk may be drawn backwards and forwards between each tang.

TOOTH POWDERS.—Tooth powders may be compounded in various ways; the following receipts afford some of the best. 1. Powdered orris-root, half an ounce; powdered charcoal, two ounces; powdered Peruvian bark, one ounce; prepared chalk, half an ounce; oil of bergamot or lavender, twenty drops. Mix these ingredients well together in a mortar until they are thoroughly incorporated. 2. Prepared chalk, an ounce and a half; Peruvian bark powdered, half an ounce; camphor, a quarter of an ounce. 3. Pound charcoal as fine as possible, in a mortar, or grind in a mill; then well sift it, and apply a little of it to the teeth about twice a week. 4. Cut a thick slice of bread into squares, and burn it till it becomes charcoal. Pound it, and sift it through fine muslin; it is then ready for use. 5. Prepared chalk, one pound; camphor, one or two drachms. The camphor must be finely powdered by moistening it with a little spirits of wine, and then intimately mixed with the chalk. 6. Powdered cuttle-fish, one pound; powdered myrrh, two ounces. 7. Coral, cuttle-fish, dragon's-blood, eight drachms each; burnt alum and red sanders, four drachms each; orris-root, eight drachms; cloves and cinnamon, half a drachm each; vanilla, eleven grains; rosewood, half a drachm; rose-pink, eight drachms; all to be finely powdered and well mixed.

TOOTH WASHES.—1. Myrrh, one ounce, dissolved in a pint of spirits of wine. A little of this, dropped on the tooth-brush, is excellent for the teeth and gums. 2. Dissolve two ounces of borax in three pints of boiling water; before it is quite cold, add a teaspoonful of tincture of rhubarb, and a teaspoonful of spirits of camphor. Bottle the mixture for use. Add a wineglassful of the solution to half a pint of teapot water, and use it daily.

TORTOISESHELL.—This shell is procured from a marine tortoise, called the hawk's-bill turtle, or *testudo imbricata*. Each animal furnishes thirteen principal plates, five along the centre of the back, and four on each side; and twenty-five smaller scales or plates, which constitute the margin of the shell. The horny plates which constitute true tortoiseshell, are separated from the bony foundation which forms the shell or covering of the animal by the application of heat; the whole shell being commonly placed over the fire until the plates begin to start from the bones, and the separation being completed by the aid of a slender knife. The yellow-coloured shell bears a higher price than that which is

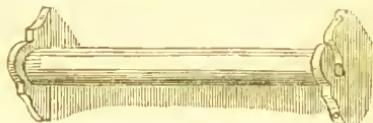
mottled. In veneering with tortoiseshell, by which very beautiful work may be produced, it is usual, to apply fish-glue, mixed with lampblack, vermillion, green, chrome, white, or other colouring matter, at the back of the shell, both to heighten its effect and to conceal the glue or cement by which it is secured to the wooden foundation.

TORTOISESHELL, IMITATION.—First steam and then press the horn into proper shapes, and afterwards lay the following mixture on with a small brush, in imitation of the mottle of tortoiseshell. Take equal parts of quicklime and litharge, and mix with strong soap lees; let this remain until it is thoroughly dry, brush off, and repeat two or three times, if necessary. Such parts as are required to be of a reddish brown, should be covered with a mixture of whiting and the stain.

TORTOISESHELL, TO PREPARE.—To mend tortoiseshell, bring the edges of the pieces to fit each other, observing to give the same inclination of grain to each, then secure them in a piece of paper, and place them between hot irons or pincers; apply pressure, and let them cool. Take care that the heat is not too great, or it will burn the shell.

TOUCH-PAPER.—Dip a piece of any unsized paper, such as blotting-paper, blue paper, or printing paper, in a solution of an ounce of saltpetre in nearly half a pint of water; then, after it has become perfectly dry, it will be fit for use.

TOWEL ROLLER.—This should be placed at the back of the kitchen-door of every cottage; or, if not at the back of the door, it should be near the sink or fixed wash-hand-basin. It is formed of deal, or any common wood, and consists of a roller,



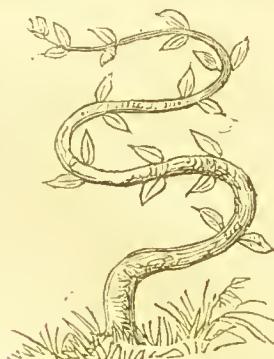
with a small pin at each end, which pins work in sockets cut out of brackets fixed to a door, or any other perpendicular surface. One of these brackets has its socket cut through, to admit of taking out and putting in the roller, when the towel requires to be changed; the other has merely a circular hole cut into one.

TOWELS.—Towels are made of diaper or huckaback, of a quality adapted to the uses to which they are applicable. They should be one yard long, and about ten or twelve nails wide. The best are bought single, and are fringed at the ends; others are neatly hemmed, and sometimes have a tape-loop attached to them, by which they can be suspended against a wall.

TRACING-PAPER.—Lay open a quire of paper of large size, and apply, with a clean sash tool, a coat of varnish, made of equal parts of Canada balsam and oil of turpentine, to the upper surface of the first sheet, then hang it on a line, and repeat the operation on fresh sheets until the proper

quantity is finished. If not sufficiently transparent, a second coat of varnish may be applied as soon as the first has become quite dry. Rub the paper with a mixture of equal parts of mnt-oil and oil of turpentine, and dry it immeditately by rubbing it with wheat flour, then hang it on a line for twenty-four hours. Both the above are used to copy drawings, writings, &c. If washed over wth ox-gall and dried, they may be written on with ink or water-colours. The paper prepared from the refuse of the flax mill, and of which bank notes are made, is also called tracing-paper, and sometimes vegetable-paper.

TRAINING. — In horticulture, training has for its object the rendering plants more productive either of flowers or of fruit, by regulating the number and position of their branches. If their number be too great, they overshade those below them, and by excluding the heat and light, prevent the elaboration of the sap required for the production of fructification. If they are too few, the sap is expended in the production of more, and in extending the surface of the leaves required for the digestion of the juiccs. The position of the branches is important, because if trained against a wall they obtain a higher temperatnre and protection from winds; and if trained with their points below the horizontal, the return of the sap is checked. Shy-flowering shrubs are made to blossom abundantly, and freely-flowering shrubs are made to blossom earlier, by having their branches bent below the horizontal line. The reason of this appears in the fact, that a plant propels its sap with greatest force perpendicularly. This is the reason why at such angles gardeners find the trained branches of their wall trees rendered more productive of blossoms and furnished with a smaller surface of leaves. A similar effect is produced by training a branch in a waving form, for two-thirds of its length are placed horizontally, as in the accom-



panying outline. Besides the usual modes of training, there are two especial modes which deserve notice. *Quenouille training* consists in training one upright central shoot in summer, and shortening it down to fifteen inches at the winter pruning, in order

that it may, at that height, produce banchies forming a tier, to be trained in the first instance horizontally. The shoot produced by the uppermost bud is, however, trained as upright as possible during the summer, and is cut back, so as to produce another tier fifteen inches above the first, and so on until the tree has reached the desired height. In this climate it is necessary to train the shoot downwards, which is easily done by tying those of the first tier to short sticks, those of each successive tier being fastened to the branches below them. When the shoots are thus arched downwards at full length, or nearly so, they soon come into a bearing state. *Balloon training* is forcing downwards all the branches of standard trees, till the points touch the earth; and they have the merit of producing large crops of fruit in a very small compass.—See **APPLE, CHERRY, ESPALIER, FRUIT TREES, ORCHARD, PEACH, PEAR, &c.**

TRANSPARENT PUDDING. — Put into a saucpan half a pound of fresh butter, the same quantity of pounded loaf sugar, and eight well-beaten eggs; stir it over the fire till of the thickness of buttered eggs, put it into a basin to cool, and mix with it a teaspoonful of grated nutmeg; bake it in a dish lined with puff paste. Before serving, grate loaf sugar over the top.

Butter, $\frac{1}{2}$ lb.; sugar, $\frac{1}{2}$ lb.; eggs, 8; grated nutmeg, 1 teaspoonful.

TRANSPLANTER. — Great difficulty has been experienced from time to time in removing trees from one spot to another. To obviate this, an implement termed a transplanter has been invented. A very simple contrivance, and one exceedingly well calculated for the removal of subjects under half a ton weight, consists of a low two-wheeled truck, with strong hooks attached to the hinder part, to which the cradle in which the plant is placed is suspended; in front is a long pole, which acts as a lever in upraising the plant, as well as securing the ball when loaded, and also as the means of draught by which men drag it along, or to which a horse may be yoked. The ball is prepared in the usual manner, and when the trench around it is opened, one of the iron sides which forms the cradle, is set upright in the trench, close to the ball, and three iron rods are passed through it under the ball, and also through the corresponding holes in the other iron side, which, for the purpose, is placed in the trench exactly opposite the first. These three iron rods are furnished at one end with eyes, and at the other with screws, so that, when they are fitted in their places, they may be screwed up tightly so as to keep the opposite sides of the ball together. These sides and rods, being all screwed up tight, the plant may be removed at once; or if there be any apprehension of danger in consequence of the roots being cut, the soil may be filled in, and the whole allowed to remain until the root wounds are healed, and the spongioles again formed, when all that is required is to remove the soil from the trench carefully, and proceed as if the lifting had taken place at once. When all

is prepared, the truck is run back, the wheels kept on two planks laid over the sides of the trench, the draught-pole is elevated until the two strong hooks in the hinder part of the trench catch into the top holes of the centre arm of each of the sides, which for that purpose are about six inches higher than the others. These being hooked on, the draught-pole is drawn down, the tree and its ball are drawn up from the pit, as by a lever, the ball secured to the truck, and, if the tree is tall, it may be attached to the draught-pole by a rope. A rope is also taken round the stem of the tree, quite at its base, and carried once or twice round the hall, and then secured to the axle. The tree is then removed to its destination, and when placed over the centre of the pit, the wheels at the same time being supported by two planks laid across the side of the hole, and blocked to keep them steady; the rope is removed, and the draught-pole is elevated so as to let the ball rest on the bottom of the pit prepared for it. The truck is then disengaged from the ball by unhooking it from the cradle, and removed; the iron rods below and around the ball are unscrewed and drawn out, which is readily accomplished by cutting back the side of the pit to allow of their being pulled out in that direction. This finishes the operation. Another contrivance for transplanting trees is as follows: The hall of the tree intended to be removed is carefully separated from the surrounding soil, with as many of its roots preserved as possible, the stronger being cut off close to the surface of the ball, while the more flexible are tied up in bundles, enveloped in soft hay or straw, and covered with a double mat to keep the whole together; a piece of cord is then placed loosely round it, between which are set upright pieces of thin boarding, from two to three inches broad, of equal length, and three or four inches apart all round, the cord keeping them in their proper places. These boards being adjusted, a strong half-inch rope doubled is put round the upper part of the ball, making it fast in front but not too tight; the remaining portion of the rope is taken down the front, and is made to surround the ball again near the bottom, after which the ropes are to be tightened up by means of a rack pin, so that the whole may be kept tightly together. The ball is then to be undermined on one side, as near to the centre as possible, and a piece of strong board, say eight or nine inches broad, is to be introduced under it, and the tree drawn gently over to the side under which the board is placed, while the operation of undermining the opposite side is

brought to the perpendicular again, resting on the two boards, which may be called the lifting board. Two strong ropes are then brought under the lifting boards, as shown in fig. 1. The ends of these ropes are then brought up and secured to the handspikes or hearers, as seen in fig. 2; and to prevent the ropes slipping off the lifting boards, notches are cut in them into which the ropes fit.

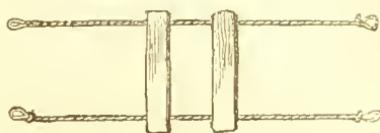


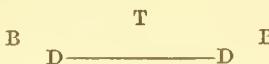
Fig. 2.

For plants which two, six, or ten men easily carry, the apparatus is quite sufficient if the distance be not great to which the tree is to be removed. When ten men are employed, two additional handspikes are placed across the others at right angles, which will afford lifting power for four men more, six being employed upon the others, in the way in which masons carry large stones upon their band-harrows. If the tree be too large for six men to carry with perfect ease, it will be better to employ a wheeled machine. Another kind of transplanter or tree-lifter is illustrated in the annexed engraving. This apparatus is formed of two pieces of iron, the breadth and thickness of a common cartwheel tire, three or four inches wide, rather more than half an inch in thickness, and about six feet long, which being bent, will reduce them to three feet across. This size will do for trees requiring from two to four men to lift them; but a size larger, and stronger in proportion, will be wanted for trees requiring more men to move them. The earth must be excavated at some distance from the tree, so as to leave a large ball of earth attached to it, and the irons must be put under the ball of earth as near the centre as possible, leaving a space between them of about two feet, or, for larger trees, a little more. Two strong poles must then be passed through the hooks in the irons, so as to form a complete hand-barrow. The tree may then be readily lifted, and cross levers may be used for larger trees. The whole may be fixed or unfixed without any loss of time; and it requires no tying, as there is no danger of the tree slipping off the irons. The flower transplanter consists of two semi-cylindrical pieces of iron with handles, and which are so inserted in the ground as to enclose a plant with a ball of earth between them. In this state they are attached to each other by two iron pins, and, being pulled up, bring with them the plant to be removed, surrounded by a ball of earth. This being set in a prepared excavation surrounded by loose earth, the transplanter is then separated as at first, and, being withdrawn, one half at a time, the earth is gently pressed to the ball containing the plant, and the whole well

going on; and when a similar board is placed under that side, the tree is to be

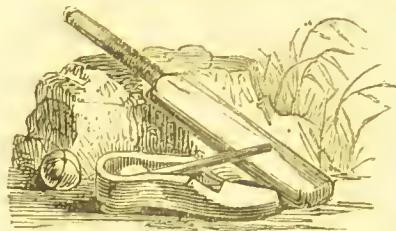
watered. Tender plants thus transplanted, receive no check, even if in flower. One of the best of these instruments consists of a cylinder about six inches long, and five inches and a half wide, open at top and bottom, and with two handles; the lower edge of the cylinder is serrated with four saw teeth, which with the rest of the edge, are sharpened by a file when necessary. There is a bottom into which the cylinder fits; two segments and a pronged instrument. Supposing it desired to remove a hyacinth, the cylinder is placed over the plant, and worked into the soil till it is filled up to the brim. The cylinder with the plant and soil which it contains, should be then lifted up, and placed on the bottom which fits so tightly as to adhere without any fastening. The two flat semicircular pieces are afterwards to be placed on the surface of the soil, on each side of the stem of the plant. It may now be watered and kept in the instrument as in a common flower-pot, or carried to any distance; when it is to be replanted, the bottom being taken off, the plant and ball of earth may be pushed through the cylinder into a pot, or a hole in the soil, as may be desired, by pressing on the semicircular plates with the pronged instrument. The same arrangement is particularly favourable for packing or sending to a distance.

TRAP-BAT.—This is a healthful and exciting out-door game, which may be played at any season of the year. In order that it may be played with the greatest advantage, a smooth piece of ground is selected, that where the trap is set down being particularly flat and even, so that any little risings or unevenness should not turn a straightly trolled ball aside. The trap is then set in the following direction:—T (trap), B (boundaries), D (distance line):—



There is no special rule as to the width of these two boundaries, marked by stumps; they are generally made by mutual arrangement, and in accordance with the number playing on each side. If only a few, the two boundaries are brought closer to each other; but, with a dozen, they would be extended. Neither is the distance line any special number of yards; but this must depend whether men, youths, or a certain number of the fair sex, join in the game. If the latter, from eight to ten or twelve yards are sufficient; but, in a match with trap-bat players, this distance is extended. Sometimes the two boundaries are placed on a level with the distance line; the level of the eye, in fact, from one boundary to the other forming the distance or standing line. At other times the distance line is below the boundaries, and marked by two smaller stakes being driven in. The outer side now range themselves along this distance line, from one to two or three yards apart, according to the number and the

width of the boundaries. One of the inner side then takes the ball up in the left hand and places it in the mouth of the trap. A sharp, quick, and straight rap with the edge of the bat is next given on the tongue



of the trap, which causes the ball to fly upwards. The moment the tongue is so struck, the bat-hand should be immediately drawn back, in order to be in readiness to strike the ball the moment it rises or falls to the best or easiest point for striking. The batsman is not compelled to strike at every ball rising from the trap; but if he aims at, and misses the ball, he is what is commonly called "once out;" on a second miss, he is "twice out;" and a third miss, the striker is "out," and can no more go in that innings. When a ball is hit, it must reach the distance line, or the striker is out; also, should the ball be struck outside either of the boundaries. Should the ball be struck over the head and out of reach of the outer side or the distance line, the striker is here again out, or should it be caught clean from the bat or first bound. In either of these cases, the striker gives up his place at the trap to another on his own side. From this, it will be seen that the utmost judgment must be exercised in striking the ball, which should be struck downwards, so as to bound several times before reaching the distance line; the hit should be made free from the shoulder, and with force, in order to be certain of carrying the ball well down to the outside party. The object of these latter, on the distance line, is to prevent the ball passing them. Each must keep his post, and only guard just that portion of the ground which is half-way between him and the next on the line. By this means no confusion arises, but simply the one takes the ball standing on the line in its direction. In trolling the ball back, only one step can be made by one foot towards the trap. The ball should be trolled up easily, so that, in the event of its not hitting the trap, it may rest within a bat's length of it. In either instance the striker is out. Every time the ball is pitched or trolled up without hitting the trap, or resting within bat's length, a notch or point is scored, and the striker continues to hit and score away until, from one or other of the above casualties, he goes out. At the end of the innings, the total is, of course, added up, and the next party go in against it. Two innings each are a game. Although the above is a very simple and interesting game, and well known to every schoolboy, still there are really very few good trap-bat

players. About two feet high is the average range of the strike, and the force of the blow on the trap must be given accordingly. At this height the ball can always be struck down with force, and the chances of giving a catch avoided. Striking too high would inevitably give a catch, or send the ball "over heads." Taking all points of the game, and the interest that is capable of being realised therefrom, trap-bat and ball affords a few hours' quiet and healthy enjoyment.

TRAVELLING BAG.—It is a matter of great importance, and conducive to personal comfort and convenience, for a person who is travelling to be able to carry with him some receptacles to contain all the articles likely to be called into immediate use, and which possess the combined advantages of being compact and easily portable. The patent travelling bag shown in the engraving is one of the nature in which are comprised all the various improvements that have suggested themselves to the inventors. It is similar in appearance, and is opened in the same manner as the "wide-opening barred bag," by the use of the registered

any article packed under them. One side of the bag can be opened to the bottom, leaving the other side still upright. The bag can be used without the fittings, the whole of the interior being then available for packing, besides the flaps. It is also supplied with a new patent handle, the ends of which slide in grooves, thereby allowing the handle to lie quite flat on the top of the frame.

TRAY.—A domestic contrivance for conveying a number of articles together, which could not otherwise be conveniently carried in the hands. They are usually made of papier mache or of tin. The former kind are the best, being much lighter and nearly as durable. Trays should not be washed with water that is very hot, as it is liable to crack them.

TREACLE.—The viscous, brown, uncry stallizable syrup which drains from moist sugar during its formation, and from the sugar-refining moulds. It contains a large portion of sweet or saccharine principle, and is therefore, particularly on account of its cheapness, a useful article of domestic economy. It is considered very wholesome, and especially for children, who are generally very fond of it.

TREACLE BEER.—Take a pound and a half of hops, and boil in thirty-six gallons of water for an hour; then add fourteen pounds of treacle, and a little yeast, to work it; ferment, and bottle.

TREACLE POSSET.—Boil a pint of milk; add sufficient treacle to curdle it; allow the curd to settle, strain off the liquid, and drink it as hot as possible.

TREACLE PUDDING.—Half a pound of flour, the same of finely-minced suet; of raisins stoned and cut small, and well-cleaned currants, a quarter of a pound each, three tablespoonfuls of treacle, and half a pint of water. Mix it all well together; boil it in a cloth for four hours, and serve it with a sweet sauce.

Flour, $\frac{1}{2}$ lb.; suet, $\frac{1}{2}$ lb.; raisins, $\frac{1}{2}$ lb.; currants, $\frac{1}{2}$ lb.; treacle, 3 tablespoonfuls; water, $\frac{1}{2}$ pint.

TREACLE VINEGAR.—To two tablespoonfuls of the best treacle put one of the best white wine vinegar; mix well together, and put it in a bottle for use. A large tablespoonful of this mixture, taken night and morning, either in substance or in a tumbler of water, is a very fine and wholesome remedy in costive and bilious habits. It makes also a fine cooling drink, and is considered to brace the stomach, and gently to promote salutary perspiration.

TRELLIS-WORK.—An arrangement of supporters upon which to train plants. The cheapest, the easiest, and the soonest made is that formed with straight poles or stakes of ash, oak, or chestnut, in length from five to six or seven feet, driving them in the ground in a range about a foot distant, all of an equal height, and then railed along the top with the same kind of poles or rods, to preserve the whole form in a regular position. They should be fully an inch and a half thick, and, having pointed them at one end, drive them with a mallet into the ground



Fig. 1.

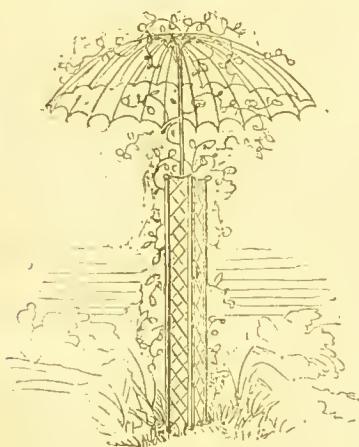
sliding-nozzle double-action lock; it then presents the whole of the fittings standing erect in the centre, as in fig. 1, leaving the sides free. By a simple contrivance, the bag is further made to open to the bottom. On two boards or standards are displayed the fittings; the boards, being supplied with a long hinge and handle, may be lifted out of the bag, and made to stand firmly on a table, as in fig. 2; the sides, then lying flat, are in a convenient position



Fig. 2.

for packing. The inner parts of the sides are provided with strong flaps, and also strong elastics and fasteners, to confine

in a straight range, close along the row of trees, a foot deep at least. To render trellis-work still stronger, run two, three, or more ranges of rods along the back part of the uprights, a foot or eighteen inches asunder, fastening them to the upright stakes, either with pieces of strong wire twisted two or three times round, or by nailing them. Trellis-work for climbers is constructed in a variety of elegant forms; but chiefly is to be noticed the manner in which the wire-trellis for climbing plants is attached to the pots. A strong wire ring is carried round the pot, a little above its bottom. To this a sufficient number of upright wires are attached all round. These upright wires are pressed down upon the surface of the pot, till they reach the rim, over which they are firmly bent till they touch the highest point of the rim, or are even bent a little within it. At this point they are secured by a second ring of stout wire, which having been done, the uprights are directed upwards, and fashioned into the pattern required. By these means a sort of collar is formed upon the rim of the pot, which prevents the trellis from slipping downwards, while at the same time the lowest ring of the wire keeps it from swinging and swaying backwards and forwards. Umbrella trellis-work is a form



excellently adapted for climbers of shrubs having long racemes of flowers. For covered walks, and for plants of less rapid and strong growth, such a trellis-work as is here illustrated is suitable. The arcade when well covered, affords pleasant shady walks, and both the shade and the beauty of the flowers are enjoyable. Trellises are of the greatest use in forcing houses, and houses for fruiting the trees of hot climates. On them the branches are readily spread out to the sun, of whose influence every branch and every turf and single leaf partakes alike, whereas if the trees were left to grow as standards, unless the house were glass on all sides, only the extremities of the shoots would enjoy sufficient light. The advantages, in point

of air, water, pruning, and other parts of culture, are equal in favour of trellis; independently altogether of the tendency which proper training has on woody fruit trees, to induce fruitfulness. The material of the trellis is either wood or metal; its situation



in ordinary hot-houses is against the back wall, close under the glass roof, or in the middle part of the house, or in all these modes. Sometimes it is in separate parts, and either fixed or moveable; and in some cases, though rarely, it is placed across the area of the house. The most general plan is to place it under the glass roof, and at the distance of from ten to twenty inches from it, according to the length of the foot stalk of the leaves of the plants to be trained. The moveable rafter-trellis consists of a rod bent parallel to the roof, with horizontal sheds or rods, extending from six to ten inches on each side, containing two collateral wires, the rod itself forming the third. This rod is hinged, or moves in an eye or loop, fixed either immediately above the plate of the parapet, or near the top of the front glass. It terminates within a foot or two of the back wall, and is suspended from the roof by two or more pieces of chain attached to the studs, the links of which are put on hooks fixed to proper parts of the roof. Their advantage is chiefly in the case of very early forcing, when they can be let down two or three feet from the glass, and thus lessen the risk of injury from frost. A whole sheet of tegument of trellis, if desirable, may be lowered and raised on the same general plan. Rafter-trellises are in general use only for such houses as are not chiefly devoted to vines, such as pineries, peach-houses, and sometimes greenhouses.

TRENCHING.—An operation in horticulture and agriculture performed for the purpose of increasing the fertility of the land, by assisting it to free itself from any superabundant surface-water, and enabling it at the same time to retain moisture longer in a dry season, by allowing a freer and more permeating action of the air and sun, by

permitting the ascent of the heat and moisture from the interior of the earth, and by obtaining an easier passage and greater range for the roots of the plants. To perform this operation, take out with the spade, at one end of the plot of land about to be trenched, a portion of the soil, two feet and a half wide, and fourteen inches deep. Carry this away to the opposite end, that it may serve to fill up the last trench. Having thus opened the first trench, fill it up with the soil which is dug and shovelled out of the second; fill up the second with the earth taken out of the third; and so on to the last, which, as before observed, must be filled up with the soil from the first trench. The first thing to be done, after removing the earth from the first trench, is to loosen the bottom with a three-pronged fork; but not to remove any more of the soil; as, should the bottom be of a retentive character, it would be by that means rendered impervious to water. In order to keep the work straight, the operator should provide himself with a couple of two-feet sticks, and, after opening the first trench, mark the distance of the next; then stretch the line from one stick to the other, and, with the spade, cut a nick by the side of it as a guide.

X							
Y							
Z							
A	B	C	D	E	F	G	H

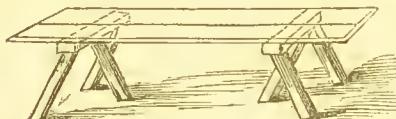
The best manner of turning over the earth, as it is taken from the trenches, is to throw the surface spadeful to the bottom of the open trench, with its face downwards; and what is afterwards taken out, lay on the top to form the new surface. Thus the upper layer of the soil becomes to the depth of the trench the bottom layer. It sometimes happens, however, that the surface-spadeful is the richest and mellowest; in such a case it should, during the work, be kept on the surface, instead of being turned into the bottom. This is to be accomplished by removing, not only all the earth out of the first trench to the farther end of the plot, but the first spadeful from the second trench also. Then what remains in the second, turn into the first, and take the top spadeful of the third trench to raise the first to the proper level.

TRESPASS.—This is generally any act whereby another is injured in person or property; but, in a more limited and common

acceptation, it signifies an entry upon another man's ground without his permission, especially if contrary to his order, and doing some damage, however inconsiderable; for which a compensation is recoverable, according as the intent of the trespasser was wilful or inadvertent, and the damage actually sustained. Every man's ground in the eye of the law is enclosed either by a visible fence or imaginary boundary line, and whoever enters upon it without leave of the owner is a trespasser. But a person is answerable not only for his own trespass, but that of his cattle; for if by negligent keeping, they stray upon the land of another and tread down the herbage, or commit other injury, this is a trespass for which the owner must answer in damages. In some cases trespass is *justifiable*, as if one come to demand or to pay money, then payable or due; or to execute, in a legal manner, the process of law. Also, a man may justify entering into an inn or public-house without leave of the owner, because when a man professes to keep such accommodation, he gives a general licence to any person to enter his doors. So, a landlord may justify entering to distrain for rent; a commoner to attend his cattle commoning on another's land; a reversioner to see if any waste be committed on the estate. But in cases where a man misbehaves himself, or abuses the authority with which the law invests him, he becomes a trespasser; as if a person come into a tavern, and will not go out in a reasonable time, but stays there all night, contrary to the inclination of the owner, he makes himself a trespasser from his first entry. An exclusive interest in the crop or herbage, without a property on the soil, is sufficient to maintain an action of trespass. But possession, actual or constructive, must be proved. If trees are excepted in the lease, the land whereon they grow is necessarily excepted also; consequently, the landlord may maintain trespass for *breaking his close*, if the tenant cut down the trees. *Trespasses in sporting* involve a number of nice points of law which are being constantly disputed. The following will be found to comprise the leading features in this respect:—The common law allows the hunting of foxes, badgers, and such noxious animals over the ground of another man for the public good, and excuses a trespass done in the pursuit of them: provided in doing this, no more damage is done than is necessary and inevitable, and that it is done in the usual and ordinary course. But the law will not justify any excessive damage to the land; for even in hunting the fox or badger, a man must not break the ground or dig for him. In general, it is a trespass at common law for any man to hunt over another's ground, for which the owner or tenant may maintain his action. And to unbag a fox, and pursue him over another's ground, would be undoubtedly a trespass. In an action for trespass for sporting over the ground of another, the jury may take into consideration, in determining the verdict, not only the actual damage sustained by the plaintiff, but circumstances of aggravation.

and insult on the part of the defendant. To prevent trifling and vexatious actions of trespass, it is provided by statute, that, where the jury who try an action of trespass, give less damages than forty shillings, the plaintiff shall be allowed no more costs than damages. But to this rule two exceptions have been made by subsequent statutes, which enact, that in all actions of trespass, when it appears that the trespass was wilful and malicious, and it is so certified by the judge on the back of the record, the plaintiff shall recover full costs. Also that full costs may be had against any inferior tradesman, apprentice, or other dissolute person, who is convicted of trespass in hawking, hunting, fishing, or fowling, upon another's ground, though the damages be under forty shillings, and without any certificate of the court. Every trespass is deemed wilful where the defendant has notice, and is forewarned not to come upon the land; as every trespass is malicious where the intent of the defendant plainly appears to be to harass and distress the plaintiff; and in such cases the plaintiff is entitled to full costs. A more summary proceeding than by action against trespass is provided by the Game Act, which enacts, that any person trespassing in the day-time in pursuit of game, &c., shall, on conviction before a justice of the peace, forfeit any sum not exceeding two pounds, with the costs of conviction; and if any persons to the number of five or more together, commit a trespass in like manner, each shall forfeit five pounds with costs of conviction. Such trespassers not quitting the ground when required, or refusing to give their addresses, may be arrested and taken before a magistrate, and on conviction be fined not exceeding five pounds.

TRESSELS.—A contrivance by which the place of a table is supplied on particular



or temporary occasions; and which consists simply of two or more wooden supports with a board laid across the top of them.

TRIFLE.—Take equal parts of wine and brandy, about a wineglassful of each, or two-thirds of good sherry or Madeira, and one of spirit, and soak in the mixture four sponge biscuits and half a pound of macaroons and ratafias; cover the bottom of the trifle-dish with part of these, and pour upon them a full pint of rich boiled custard, made with three-quarters of a pint, or rather more, of milk and cream, taken in equal portions, and six eggs, and sweetened, flavoured, and thickened. Lay the remainder of the soaked cakes upon it, and pile over the whole, to the depth of two or three inches, previously well drained; sweeten, and flavour slightly with wine only; less than half a pint of thin cream (or of cream and milk mixed); wash and wipe the whisk, and whip it to

the lightest possible froth; take it off with a skimmer, and heap it gently over the trifle.

Macaroons and ratafias, $\frac{1}{2}$ lb.; wine and brandy mixed, $\frac{1}{2}$ pint; rich boiled custard, 1 pint; light froth to cover the whole, $\frac{1}{2}$ pint of cream and milk mixed; sugar, 1 dessertspoonful; wine, half glassful.

TRIPE BOILED.—Take six pounds of tripe—the thick is the best; boil it gently in milk for two hours. In the mean time, peel a dozen large onions, and boil them in water gently until they are done thoroughly. Add a little thickening, flour and water mixed thin, into the tripe saucepan; then serve in a soup-tureen, with the onions on the top, being careful not to mash the onions; send a little nice melted butter in a butter-boat, and some nice mealy potatoes stewed.

TRIPE FORCED.—Cut the tripe into small square pieces, dip them in some small beer, batter, or yolk of an egg, and fry them in good dripping till of a nice light brown; then take them out, let them drain for a minute, and serve with plain melted butter.

TRIPE FRICASSEED.—Cut it into small pieces; put them into a saucepan, with as much white wine as will cover them, white pepper, shred ginger, a blade of mace, sweet herbs, and an onion. Stew it a quarter of an hour, take out the herbs and onion, and put in a little shred parsley, the juice of a lemon, half an anchovy cut small, a gill of cream, and either the yolk of an egg or a piece of butter. Season to taste, and garnish with lemon.

TRIPE PIE.—Lay into the bottom of a dish some thinly-sliced cold or raw ham, then put in a layer of tripe, with the jelly adhering to it; season with pepper and salt, and add a bit of butter; fill the dish in this manner, and put in a few tablespoonfuls of brown stock; cover the dish with puff paste. A beef steak may be substituted for the ham, laid into the bottom, and the dish filled up with tripe.

TRIPE ROASTED.—Cut the tripe into two oblong pieces; make a forcemeat of bread-crumbs and chopped parsley, seasoned with pepper and salt, bind it with the yolk of two eggs, spread it upon the fat side of the tripe, and lay on the other fat side; then roll it very lightly, and tie it with packthread. Roast and baste it with butter. It will take one hour, or one hour and a half. Serve it with melted butter, into which put a tablespoonful of ketchup, and one of lemon pickle.

TRIPE STEWED.—Tripe is prepared by tripe-sellers. Wash it in several waters; then put it into a stewpan, with some strips of bacon-fat, carrots, onions, bay-leaf, thyme, parsley, shallot or garlic, cloves, allspice whole, salt, and peppercorns; moisten it with some spoonfuls of stock and consommé, if you have any ready; add a pint of white wine. Stew gently six hours; let it cool; cut onions in slices, fry them in oil or butter, with chopped parsley; add the tripe to this, and garnish with sippets of bread fried in butter.

TRIPE, TO CHOOSE.—There are two dis-



Fig. 1.

inct kinds of tripe, and, in choosing it, the honeycomb tripe, fig. 1, will be found the

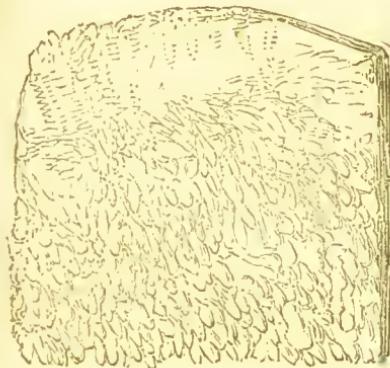


Fig. 2.

best for boiling; and the thin tripe, fig. 2, the most suitable for frying.

TROLLING.—One of the branches of angling which is generally practised at mid-water or thereabouts, and includes spinning with a live, a dead, or an artificial bait, with a small fish generally, or its representative. When neither fly fishing nor bottom fishing can be practised, in consequence of certain forbidding circumstances of water and season, trolling can be resorted to as an excellent substitute. The fish most commonly taken by any sort of trolling in our rivers are pike, perch, and trout. Trolling is divided into three parts, viz., sinking and roving, trolling with gange and snap-hooks, and spinning. *Sinking and roving* is practised with a live bait; a minnow or a loach for the common trout and perch; bleak, gudgeon, dace, or roach, for pike or large trout. The best general bait for all sorts of

trolling is the gudgeon. The rod used should be a long bottom one, with a good winch, and prepared plaited silk trolling-line. For foot-line, about a yard and a half of the best gut. The link to which the hook is tied should be of fine gimp, if pike are sought for; but gut, or three-twisted hairs, will do for trout and perch. The baits must be strong and lively, and placed on the hooks with as little injury to them as possible. Allow the bait to swim here and there, generally at mid-water, but in deep places, deeper, drawing it up gently to the surface now and then, letting it sink again, and guiding it to the best looking spots of the locality. *Snap-baits* are mostly used at seasons when pike do not feed with sufficient voracity to pouch their baits promptly. Their merit lies in allowing the troller to strike quickly, before the fastidious fish, suspecting something wrong, has time to eject the bait from his mouth. The rod used must be short and stiff; that known as the punt barbel rod being the best. Snap-baits are twofold—one, which does not spring when you strike the fish, and the other which does. The first-named consists of three hooks—two large ones, tied back to back, with their barbs pointing different ways; and one smaller hook tied on at the top of the shanks of the others, and pointing straight out from them. The spring-snap is generally used with dead bait; it requires deep insertion in the bait to allow the spring to act, which it will not do without some considerable resistance. *Spinning* is a dashing, killing method of angling, and the practice of it requires considerable muscular exertion. The best spinning rod is made of a single piece of East India mottled cane, fourteen or sixteen feet long, well ringed, with a screw winch, requiring no wrench fittings. With a rod of this description, salmon and large trout can be trolled for in the deepest and widest waters. In narrow streams, the angler can spin with a very small portion of line out, and almost avoid casting, the length of the rod allowing the bait to be dropped noiselessly wherever it is wished, and to spin it accordingly. The baits used in spinning should be of the most brilliant colours: the brightest minnows, gudgeons, dace, roach, you can procure. The hooks used in spinning should be of the bright steel colour of the wire, not changed to the ordinary blue hue of hooks; and they should be whipped on with light-coloured silk, waxed with white wax. Artificial spinning baits are sold at the various tackle shops. They all kill fish more or less successfully; but the majority of them are inferior to the natural bait.

TROUT.—This fish is found in lakes, rivers, and minor streams, and is finest in appearance from the end of March to about the middle of August; their spawning time is from November to January. The most brilliant and beautiful trout are generally found in streams that flow principally over rocky bottoms. They feed upon worms, minnows, and other small fish; but their most favourite food is the fly. In angling for trout, a stout rod, running tackle, and

a cork float, are required; the principal baits consist of minnows, small frogs, snails, caddis, grubs, and artificial flies. Trout begin to take a bait on or near the ground early in the year, and, before March, will readily take most bottom baits all day long in favourable weather; but, as the summer advances, it is only very early or very late in the day that they will take a bait near the ground, they being at the intermediate hours more disposed to rise to the surface in pursuit of flies and other winged insects. In March and April, use the worm in the forenoon, and a fly or minnow, according to the state of the water, the rest of the day; in the swiftest and sharpest currents, provided the day be warm and bright, and in the deeps early and late; but if the water be discoloured or very thick, try the gravelly shallows near the sides and tails of streams with a worm only, to run on the bottom with one large shot, a foot at least from it. When the water is clearing off, and is of a dark brownish colour, first use the worm, which should be a well-scoured brandling, cast in as a fly at the head of the stream, and move it gently towards you, still letting it go down with the current so as to keep it a little under water; the line should be rather short, with no lead upon it, and the hook fine. Then try the minnow, and as the water clears, the artificial flies should be tried. In fishing for trout with the worm, use running tackle, and employ a strong line; but let its strength consist in the excellency of its material, rather than its bulk, to which end the hook should be small; the gut fine, the shooting fine also; and let the whippings be well concealed, for, in bright water, trout are singularly wary and suspicious. In some few instances a float is indispensable, and, when such is the ease, let that also be as light and fine as the water will allow; in many cases, however, a float is unnecessary in trout fishing, and a trapping bait without one is commonly to be preferred, which is thus managed:— Make use of a rod from fourteen to sixteen feet long, firm, but light; draw out as much reel line as, with the gut link, will altogether reach somewhat beyond the length of the rod; if it be longer it will be unmanageable; if shorter, it will not give all the scope or range it ought. The hook may be No. 5, 6 or 7, according to circumstances. Trout is by some persons "dipped for," at almost all times and all seasons, either with winged insects or with their larvæ; but the principal dipping time for both is when the stone-fly and May-fly are on the water. To bait with either a stone-fly, or a green or gray drake, put two or three on the hook together, which should be carried through the thick part of the fly's body under the wings, with their heads standing different ways; pass your hook through them under the wings, about the middle of the insect's body, and take care that your fingers are always dry when baiting, or you will soon kill or spoil your bait. As the season advances, beetles, bees, and large flies of all kinds, may be used with effect. The fly-minnow is sometimes successful, when

trailed, dipped, or cast on the surface of the stream, and provcs occasionally so on the still waters.

TROUT BAKED.—Where there is an oven it is decidedly the best, and also the simplest mode of dressing all the larger sort of fresh-water fish. Dry the fish, lay them in a baking-dish, season with pepper and salt, and put a little butter on them; bake them according to the size; add the juice that comes from the fish to some rather thick melted butter.

TROUT BOILED.—Clean, scale well, and boil whole in cold water, allowing it to boil gradually; vinegar or horseradish put in the water improve the flavour. When done, carefully drain off the water so as not to break the skin, and serve with lobster shrimp, or anchovy butter sauce.

TROUT BROILED.—Whee the fish is clean washed and well dried, tie it round with packthread to keep its shape entire, melt some butter with a good deal of basket salt, and cover the trout with it; put on a clear fire, at a good distance, and broil it gradually. Wash and bone an anchovy, cut it small, and chop some capers; melt some butter with a little flour, pepper, salt, nutmeg, and half a spoonful of vinegar. Pour this over the trout, and serve it hot.

TROUT COLLARED.—Wash them clean, split them down the back, bone, and dry them well in a cloth; season them well with finely pounded black pepper, salt, and mace, roll them tight, and lay them close into a dish; pour over them an equal quantity of vinegar and beer, with two or three bay leaves, and some whole black pepper; tie over the dish a sheet of buttered paper, and shake them an hour.

TROUT FRIED.—Scale, gut, and clean them, take out the gills; egg and crumb them, then fry in lard or oil until of a light brown. Serve with anchovy sauce and sliced lemon.

TROUT IN WHITE SAUCE.—Boil the fish gently in as much water and light white wine, in equal quantities, as will only cover them. When done, keep them hot while you boil the vinegar, with a bit of butter and a little flour. Meantime have ready beaten two eggs, with a spoonful of cold water, and pour them and the sauce to and fro at a little distance above the stove, till of due thickness, and serve the fish in it, adding a little salt.

TROUT POTTED.—Mix together the following quantity of finely-powdered spices:—One ounce of cloves, half an ounce of Jamaica pepper, quarter of an ounce of black pepper, quarter of an ounce of cayenne, two nutmegs, a little mace, and two tea-spoonfuls of ginger; add the weight of the spices, and half as much again of salt, and mix all thoroughly. Clean the fish, and cut off the heads, fins, and tails, put a tea-spoonful of the mixed spices into each fish, and lay them into a deep earthen jar with the backs downwards; cover them with clarified butter, tie a paper over the mouth of the jar, and bake them slowly for eight hours. When the back bone is tender, the fish are done enough. Take them out of the jar, and put

them into a milk pan with the backs upwards; cover them with a board, and place upon it a heavy weight. When perfectly cold, remove the fish into fresh jars, smooth them with a knife, and cover them with clarified butter.

TROUT STEWED.—Melt three ounces of butter in a broad stewpan, or well tinned iron saucepan; stir to it a tablescoopful of flour, some mace, cayenne, and nutmeg; lay in the fish after it has been emptied, washed very clean, and wiped perfectly dry; shake it in the pan that it may not stick, and when lightly browned on both sides, pour in three-quarters of a pint of good veal stock, add a small faggot of parsley, one bay-leaf, a roll of lemon-peel, and a little salt; stew the fish very gently from half to three-quarters of an hour, or more, should it be unusually fine. Dish the trout, skim the fat from the gravy, and pass it through a hot strainer over the fish, which should be served immediately. A little acid can be added to the sauce at pleasure, and a glass of wine when it is considered an improvement. This receipt is for one large and for two middling-sized fish. Trout may be stewed in equal parts of strong veal gravy and of red and white wine, without having been previously browned: the sauce should then be thickened, and agreeably flavoured with lemon-juice and the usual store sauces, before it is poured over the fish. They are also good when wrapped in buttered paper, and baked or broiled; if very small, the better mode of cooking them is to fry them whole. They should never be plain boiled, as, though naturally a delicious fish, they are then very insipid.

TROUT, TO CHOOSE.—It is a very fine fresh-water fish; all the kinds of this fish are excellent, but the best are the red and yellow trout. The females are considered the best, and are known by having a less head and deeper body than the male; their freshness is known by the same methods that have been already mentioned for other fish.

TROUT, WITH BACON.—Cover the bottom of a small oval paper form with a few very thin slices of fat bacon; cut down the back, some nicely washed small trout, and, having removed the bones, lay the fish open flat upon the bacon; sprinkle with chopped parsley, pepper, salt, a little mace, and two cloves finely pounded. Bake half an hour in a quick oven, and serve in paper.

TRÖWEL.—This implement is made of iron, from six to twelve inches long in the plate, and half as broad, hollowed like a scoop, and fixed on a short handle to hold with one hand; it is convenient in removing small plants with a ball or lump of earth about their roots, lifting bulbous flower-roots after the flowering is past in summer; planting bulbs in patches or little clumps about the borders, for digging small patches also in the borders, and sowing hardy annual flower seeds; likewise for filling small pots with mould, stirring the surface of the earth in pots, and fresh earthing them when necessary.

TROY WEIGHT.—The troy pound is the legal standard, though only actually used in weighing precious metals and stones, and apothecaries' drugs. There is no doubt that it was originally the pound of silver, the pound sterling; and there is evidence that this pound was sometimes described as divided into twenty parts, called sterling shillings. The pound troy is now divided for gold and silver, into twelve ounces, each ounce into twenty pennyweights, and each pennyweight into twenty-four grains. But for medicine, it is divided into twelve ounces, each ounce into eight drams or drachms, each drachm into three scruples, and each scruple into twenty grains. A cubic foot of water weighs 75.7374 pounds troy.

TRUCK.—A species of conveyance generally drawn by the hand, and used for transporting merchandise, agricultural produce, &c., from one place to another by the aid of manual labour only. Trucks prove very convenient when the articles which are to be transported, lie in a situation where a horse and cart, or a waggon could not reach without difficulty. They are usually lent out at a certain charge per hour.

TRUFFLES, CULTURE OF.—These edible fungi may be easily cultivated where there are woods or coppices of oak or hazel, and



where the soil is not too stiff or inclining to chalk. The soil where they abound most is a reddish sandy loam; this will then be the best for the purpose of culture, especially if it has lain long uncultivated. The soil must be undisturbed till the plants are ready to be put in, which should be in the months of October, November, and December, if the weather be open; for at that time the truffles are found in their full ripeness, and then, likewise, they are in a state of putrefaction, which is the time when the seeds are prepared for vegetation. The soil and the truffles thus being formed, the cultivator must proceed as follows: Open a piece of ground of convenient space, and take out the earth to the depth of about eight inches, screening it, that it may be as fine as possible; then lay this fine earth to the depth of two or three inches at the bottom of the trench or open ground, and upon it lay some of the over-ripe truffles, about a foot and a half distance from each other, and as soon as possible prepare a thin mud made of the screened earth and water, well stirred and mixed together, and pour it on the truffles till the open ground is quite filled up. By this means, in a few hours, the ground will be closely settled about the

truffles as if it had never been dug or disturbed at all, and a good crop may be secured.

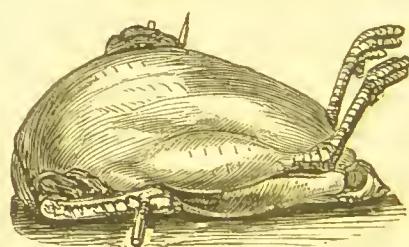
TRUFFLES POTTED.—Cut up a pound of sweet fresh butter, and dissolve it gently over a clear fire; take off the scum which will gather thickly upon it, and when it has simmered for three or four minutes, draw it from the fire, and let it stand until all the buttermilk has subsided; pour it softly from this upon six ounces of ready-pared sound French truffles, cut into small but rather thick slices, and laid in a delicately clean enamelled saucepan; add a full seasoning of freshly pounded mace, and fine cayenne, a small saltspoonful of salt, and half a large nutmeg. When the butter has become quite cold, proceed to heat the truffles slowly, shaking the saucepan often briskly round, and stew them as gently as possible for twenty minutes, or longer should they not then be tender. If allowed to heat and boil quickly, they will become hard, and the preparation, as regards the truffles, will be a comparative failure. Lift them with a spoon into quite dry earthen or china pans, and pour the butter on them; or, add to them sufficient of it only to cover them well and to exclude the air, and put the remainder of the butter apart; it will be finely flavoured, and may be eaten by delicate persons, to whom the truffles themselves would be injurious. It may also be used in compounding savoury sauces, and moistening small eroustades before they are fried or baked. The truffles themselves will remain good for months when thus prepared, if kept free from damp; and in flavour they will be found excellent. The parings taken from them will also impart a very agreeable savour to the butter, and will serve extremely well for immediate use. They will also be valuable as additions to gravies or soups. We should observe that the juice which will have exuded from the truffles in the stewing will cause the preparation to become mouldy, or otherwise injure it if it is put into the pans either with them or with the butter. The truffles must be well drained from it when they are taken from the saucepan, and the butter must remain undisturbed for a few minutes, when it can be poured clear from the juice, which will have subsided to the bottom of the pan.

TRUFFLES STEWED.—Wash and brush clean the truffles, put them in a stewpan with a little wine, a slice or two of fat bacon, and a little good broth; let them boil gently until quite tender, then serve them in a napkin dry, as you would roasted chestnuts.

TRUFFLES. USE AND NATURE OF.—Although enumerated among vegetables, truffles are not as yet known to be capable of cultivation, but are found underground by pigs and dogs trained for the purpose. When sold in the shops they are of different qualities, the white, the red, and the black, and are, therefore, generally thought to be of different species; but the difference arises from the period of their ripeness, as they are always dug up the moment they are found, and the black being the most mature,

always bear the highest price. Their chief use is to add high flavour to sauces, stews, and pies, as half an ounce simmered in a pint of gravy, will greatly improve them. Truffles are also frequently employed to stuff poultry.

TRUSSING.—A preparation which poultry, game, &c., undergo previously to being dressed. All kinds of poultry should be killed the first thing in the morning, when their crops are empty. They should be plucked while they are warm; all the bladders taken out, and the hairs singed off with white paper. It is the general opinion that fowls and pigeons should not be drawn until just before they are dressed, as it is apt to make them dry. In drawing poultry, a very small slit should be made under the vent with a penknife, in this, the forefinger should be inserted, and any internal fat there may be about the vent, draw out. Next, take hold of the gizzard, which may be known by its being the hardest part of the interior; draw it out carefully; it will generally bring the whole of the intestines with it, but if the liver should be left, again insert the finger and take hold of the heart, which will bring out with it the liver, which must not be touched for fear of bursting the gall-bladder. Trim round the vent with a pair of scissors. Be careful to take away the gall-bladder from the liver without breaking it, for if one drop of the gall escapes, the whole liver is spoilt. The gizzard consists of two parts, with a stomach or bag, in the middle, containing gravel and undigested food; one part of the skin by which the two parts of the gizzard are united is rather narrower than the other; slit this with a knife, and turning the gizzard inside out, remove the stomach-bag and trim round the gizzard, but avoid cutting the skin by which it is joined in the middle. In trussing poultry, cut off the neck about two joints from its commencement at the shoulders, but be sure to leave half an inch or more, of the skin longer than the part of the neck remaining, for the purpose of wrapping over when tied. The feet and legs of young chickens intended to be roasted should be taken off about an inch below the first joint; the legs of fowls are generally left on, but they must be sealed in boiling water, and the claws and skin taken off; then turn the tops of the pinions

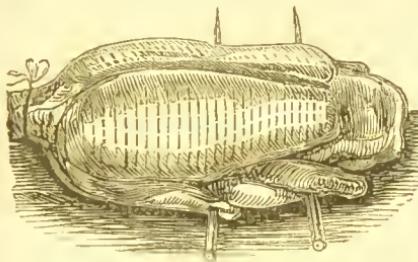


over the back, place the legs in an erect position, and with a skewer fix the middle joint of the pinion to the side, and pass it

through the body to the other pinion. The legs of chickens must then be pressed down on the apron close to the breast, and have a skewer passed through the side bones, leg, and body, to the side bone on the opposite side. The legs of capons and large fowls are fixed outside the side bone, the same as

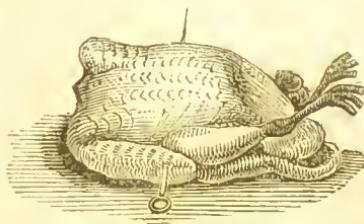


a turkey, and a skewer is also passed through to the legs below the toes. For a fowl that is to be boiled, a slit is made on each side of the belly, the back, and the legs, and the trussing is completed. The feet, heart, liver, lights, and milt are to be dressed separately when well cleaned. Ducks have the feet always left on; but the wings must be taken off at the middle joint. In doing this, leave more skin than belongs to the bone. The feet must be scalded, and the skin and claws taken away; they then must be turned over the back. In inserting the skewers, keep the thigh-joints outside of the pinions, and run the skewer through the leg, then through the bit of skin that hangs below the pinion, then through the body,

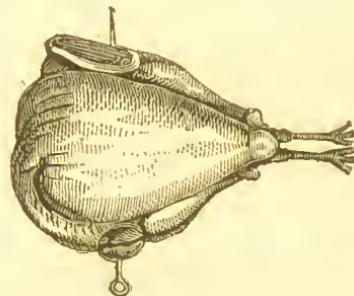


the other pinion, skin, and the other leg. The short skewer must be inserted just above the joint, which is twisted to turn back the feet. Tie the skin round the throat, put on the seasoning at the vent, and turn the surrounding parts through a small slit in the apron. Geese are trussed in exactly the same way as ducks, except that the feet are cut off, and dressed with the giblets. The liver is sometimes dressed separately, and considered by some persons a great delicacy. A piece of greased white paper should be laid over the breast, and secured with a string, before a goose is put down to wash. Turkeys are trussed in the same way as fowls; but the sinews of the leg must be drawn out before trussing. The gizzard of a turkey, intended to be roasted, should be scored, and both gizzard and liver covered with the caul of veal or lamb; but buttered paper does as well, and is more generally

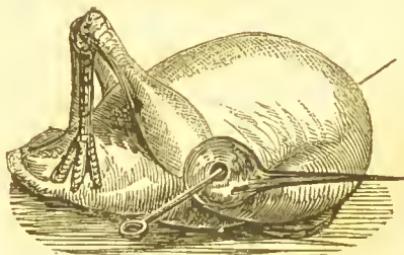
used: this is to prevent them becoming dry. The breast should be secured in the same way, with a piece of buttered paper. Thoroughly clean the head, and thrust it under the wing. Pigeons should be cleaned with great care. For roasting, truss with the feet on, tie the joints close down to the hind quarters, and turn the feet over the front. For boiling or stewing, cut off the feet, and truss just as fowls for boiling. For broiling, lay them open by cutting them down the back, and laying them quite flat. As pigeons



have no gall, no extra care will be required with the liver. Pheasants, Partridges, and Guinea Fowls, are trussed with the head tucked under the wing, and the feet on, which are twisted and tied to the hind quarters, and turned back over the breast.

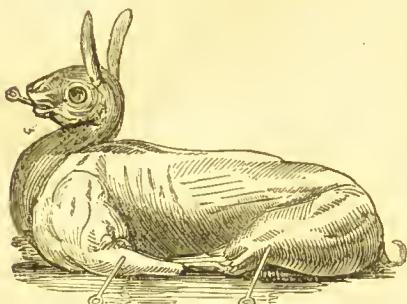


The liver may be used in the stuffing. Wild ducks, and all other web-footed wild fowl, should have the feet left on, and be cleaned and trussed in the same manner as tame ducks. Woodcocks, Plovers, &c., and all

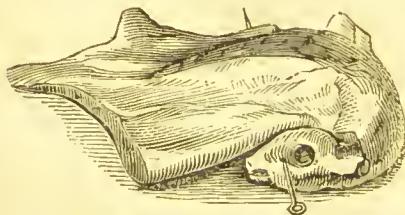


other birds that live by suction, are not drawn. The feet are left on, the knees twisted round each other, and raised over the breast, by which means each foot turns back and falls on the side of the hinder

parts. *Hares* trussed for roasting, have the legs turned back without disjoining, so that the haunches are thrown up, much in the form that a cat is often seen sitting, the end lines of the fore and hind legs meet each other, and lie side by side. Two skewers should be inserted, one where the end of the leg meets the fleshy part of the shoulder, and the other where the shoulder meets the fleshy part of the leg. The head is fixed back, with a skewer thrust into the mouth,



through the head, on to the back between the shoulders. The belly should be slit no more than is necessary for taking out the paunch. To secure its keeping in place, a string is employed for bracing it; the string is laid across the back, twisted round the end of both skewers, and brought over across the back and tied. In skinning hares and rabbits, particularly hares, the ears and tail should be preserved entire, as they improve the appearance of these dishes on the table, and are much esteemed. *Rabbits* for boiling are opened all the way down the belly; joint the legs at the hind quarters, so as to admit



of their turning along the sides; turn the shoulders back to meet them, so that the lower joints of each lie straight along, side by side. The head should be skewered down to the right shoulder. *Rabbits* for roasting are trussed like hares. *Fawns* or *Kids* are generally trussed in the same way as hares. As the flesh is of a dry nature, they should be covered with a caul or buttered paper, which should be fastened on with a string. *Sucking pigs*, the moment they are killed, should be put into cold water for a few minutes. Put the pig for half a minute into a pail or pan of boiling water, then take it out and pull off the hair or bristles as quickly as possible. If any should remain, put it again into hot water; when quite free

from hair, wash it thoroughly in warm water, and then rinse it several times in cold water. The feet should be taken off at the first joint; then make a slit down the belly, and remove the entrails. Once more, wash the pig inside and out in cold water, and wrap it in a wet cloth till it is ready to be dressed, which should be as soon as possible.

TULIP.—This is one of the choicest among florists' flowers, and its culture is accordingly made an object of extraordinary attention. *Seed sowing.*—The raising of tulips from seed is a very tedious process, as it is about seven years before they blow, and often two, three, or more years before they break, as it is termed, into the variety of colours so much fancied among cultivators. It is a common and very good way, therefore, to make a sowing every year, with the expectation that, at the end of seven or more years from the first sowing, new varieties may be obtained. The seed should be sown about the end of September, or any time in October. Pans should be prepared about five inches deep, with holes to drain off stagnant water, and a layer of broken potsherds, an inch thick over the bottom, for the same purpose. Over these must be placed pieces of slate horizontally, in order to preserve the drainage, and to check the downward growth of the root, which generally descends until hindered by some impediment. If it find none, it frequently exhausts itself, and no bulb is formed; besides, the larger it grows, the smaller the bulb will be. The check given by the pieces of slate will often cause a bulb to grow larger in one year than it might otherwise grow in three. The annexed engraving shows the section of a tulip seed-



pan, to show the mode of draining and of checking the roots by slates. The pan should be filled up over the slates with light rich earth, such as is termed sandy loam, sifted lightly through a sieve. One-third of decayed horse-droppings is recommended to be mixed with the earth. When the surface has been made even, let the seeds be sown very regularly, and as thinly as possible. Some of the same earth must then be sifted over the seed to the depth of a quarter

of an incb. The pans should be placed at first where they may have the morning sun till eleven o'clock; but as the cold weather advances, they must be removed to a more open situation, where they may have the benefit of suushine during the whole day. At the same time, it is necessary to shelter them from cold winds, and to protect them from frost and excessive wet. In this way they are to be kept during the winter; but, in March, when the plants appear above ground, in a similar manner to onions, the paus may be removed to their first situation. The seedlings are not so delicate as to need any extraordinary attention, except that, when the season is dry, moderate watering must not be neglected, and they will require to be shaded from a hot sun, but not placed under the drop of trees. They must be carefully weeded, and kept clear of moss. The leaves will die off about the beginning of June; but the young bulbs are then too small to be moved, and it is better to allow them to remain two years without disturbing them. When the leaves begin to turn yellow, it will not be necessary to water any more, though they must be kept growing as long as possible. It is important, also, to distinguish between the natural withering of the flowers and the yellowness produced by dry cutting winds. Soon after the leaves decay, a little fresh earth may be sifted over the surface of the pans; and again, at Michaelmas, fresh earth should be added, without disturbing the undersoil, where the minute young bulbs are lying dormant. The second year's management is precisely like the first, up to the period when the leaves decay; then pans of fresh earth, with good potsherd drainage and horizontal slates, should be prepared, as in the first instance, for sowing the seed, and the young bulbs must be taken up from the seed-pans, and planted out immediately. The earth in the fresh pans may be about five or six inches deep over the pieces of slate, and the bulbs may be planted about two inches apart and two inches deep; or they may be planted in the open ground. About the beginning of November in the south, or a fortnight earlier in the north, it will be advantageous to sift some fresh earth over the surface of the pans, to prevent the growth of moss and the penetration of frost. When the winter proves severe, however, they will require the further protection of mats or pease haulm, as the young bulbs are more liable to suffer from frost than those which are older. When the leaves make their appearance in the spring, the surface of the soil should be stirred, but not too deeply, for fear of injuring or displacing the bulbs. Should the spring prove dry, the plants will require to be frequently refreshed with moderate waterings; and when the leaves die off, all weeds must be removed, and the surface covered with fresh earth—a process that will require to be repeated about Michaelmas. The year following, they are to be managed precisely in the same manner as old roots and offsets. On the bulbs being taken up the fourth summer, they will

be much improved in size, and may now be planted out in an appropriate bed, prepared as for blooming bulbs, in drills six inches asunder, and three inches deep. Some will bloom the fifth season. When in full bloom the flowers should be examined, to mark such as exhibit the best properties, in order to separate them from others at the period of shifting. These are afterwards to be planted out in beds apart, under the name of breeders, which are plain or self-coloured, on a white or yellow bottom, without the fine streaks of colour produced by the process of breaking. This process, though of great interest to the cultivator, is little understood, and has, therefore, been either left to chance, or to empirical means founded on no certain principles. The time which a breeder requires to break, is equally uncertain with every other thing connected with the process; some flowers breaking in the leaf, as it is termed, and others taking from one to twenty years. All efforts to hasten the period have been in vain. *Culture of the offsets.*—When tulips have broken into a good disposition of colour, they can only be increased by offsets, which require to be treated in the same manner as seedling bulbs of similar size. The offsets should be separated from the parent bulb, after drying at Midsummer, before putting them away in drawers or bags. The offsets must not be kept long out of the grouud, though some advise planting them as late as November. It is not convenient to plant offsets among the blowing roots; they answer best in a border by themselves, where they may be set pretty closely together, especially when they are small. These offsets should be taken up when their leaves wither off, the same as the full-grown bulbs; otherwise, when the season proves very wet, they are apt to rot, particularly those of the early growing sorts, which are not by any means so hardy as the late blowers. When the offsets have been thus taken care of for one year or more, till they attain the size of full-grown bulbs, they may be planted out in flowering beds. *Planting out full-grown bulbs.*—A good tulip bulb ought to be solid, firm, and covered with a brown skin; and great care must be taken not to bruise the bulb or the crown, for this will infallibly produce canker, and, probably, occasion the rotting away of the whole bulb. When a valuable bulb has been wounded or injured, the part should be pared with a sharp penknife, and left for some days to dry the wound before it is planted, as the moisture of the soil would otherwise cause the wounded part to become putreseent. The aspect most advantageous for flowering is one that is open and airy, that the plants may have the full benefit of sunshine during the whole day in the earlier stages of their growth. At the same time, it ought not to be exposed to the sweep of the north and east winds, which would tend much to injure the leaves in the spring, and would, consequently, affect the beauty of the bloom. *Culture of the tulip.*—The tulip grows best in loam from rotted turf cut from an old pasture, and if, at the depth of two or three feet there be a layer of two or

three inches of cow-dung, the plants will feel the benefit of it just at the time they most need it, when they are rising for bloom and swelling their pods. The tulip has to be planted six inches apart every way, and three inches deep; this is best managed by levelling the bed four inches lower than it is to be left, placing all the bulbs in their intended situations, and then covering them with four inches of soil, which will give three inches above their crowns. When the flowers begin to show the colour of their blooms, shade them from the sun, and never let any but the very early or the very late evening rays reach them. At the same time it cannot be too strongly recommended that they should be uncovered at every opportunity by daylight; on cloudy days, and on all occasions when the sun is not hot, they should have as much air as possible. When the bloom has declined, take all the cloths away, and remove from the flowers all the seed-pods, unless you want to save them; when the stems die half-way down, and the leaves begin to turn yellow, take them all up, dry them in the shade, and lay them in a cool dry place, protected from frost. Planting should all be done during October and the early part of November. After planting, the bed should be hooped over, and mats or canvas kept ready at hand to protect it from very heavy rains or severe frosts. Too long or frequent covering, however, will keep the influence of the air from the roots, and thereby cause the plants to grow weakly; and moderate rains are more beneficial than injurious. About the end of February all the healthy plants will show leaf, and at this time they require to be looked over carefully, to detect any appearance of sickliness or canker. When a cankered spot is discovered, it ought to be cut out with care on a mild dry day, and the wound exposed to the air, which, in most cases, will heal it, unless the whole plant be in a diseased state; and the surface of the bed should also be stirred, the lumps bruised, and the earth laid close to the stems. As soon as the buds begin to bleach or show colour, the mats should be discontinued by day, unless when the air is very bleak, or when frost is apprehended at night. When the colours of the flowers begin to show, the awning should be let down in the hot sun, for exposure to either sun or rain would cause the colours to run and mix, and in this way would spoil the beauty of the flowers. But they should have all the air mornings and evenings, and when the sun does not shine. The awning should be large, and lofty enough to allow of being walked under. The angle of the roof should be acute, because, if it be too flat, the heavy showers which sometimes prevail when tulips are in bloom, are apt to penetrate the canvas and damage the flowers. The awning is composed of stout duck or canvas, with a lining of light calico on the ties of the roof, like a ceiling over the whole extent of the bed; the white colour of the cloth adds much to the softness of tint and semi-transparency of the flowers. There should be a door at each end, for the convenience

of admitting a current of free air when the weather is too inclement to admit of the awning being pulled up. This is effected by very simple means: the lines pass through staples in the side of the ridge-board, where a knot at the end fastens them, and the lines must be brought down under the pole and made to pass through a fixed pulley at the top of each line. They are then to be brought down, and those on each side passed through a block containing as many pulleys or sheaves as there are lines. By these means all the lines attached to each side of the awning will be collected into one parcel; and either on one side or both, can be raised or lowered to any degree that may be necessary. The sides of the framework should be closed with canvas drawn as tightly as possible. At the time the awning is erected, the hoops ought to be removed, and boards placed round the bed, to keep the mould from breaking down at the edges. The paths should also be made a few inches lower, in order to bring the flowers nearer to the eye. As some of the bulbs may fail to send up flower stems, or may perish altogether, the vacancy thus produced ought to be supplied by breaking off the flower stems of other plants, and immersing them in phials of water sunk in the bed. *Quality of a good tulip.*—From one-third to one-half a hollow globe, when expanded properly, edge smooth and even, petals thick, marking unbroken round the exposed edges of the petals, when expanded, but not to be edged more than half way down the petal, all six petals alike; colours well defined, and the base of the petals, forming the bottom of the cup, must be free from the slightest stain, the white or yellow, or any shade between them, must be pure, all alike; the stem straight and stiff, from eighteen inches to three feet in length. *Crossing.*—As the seedlings will, in general, partake of the form and habit of the plant from which the seed is gathered, and its colours only will follow those of the flowers from which the pollen is taken, so, as a general rule of crossing, therefore, colours should be crossed upon form, and the contrary, according to the intention of the operator. When the flower has been selected that is intended to stand for seed, the anthers must be removed before they burst and scatter their pollen. This is best done early in the morning, the pollen being then more moist than when the sun is strong; and hence it will not so readily escape by accident, and thwart the experiment. For a different reason the crossing ought to be performed at mid-day, by taking several anthers from the flower selected on account of its colours, and dusting the pollen from them on the summit of the pistil. Too much pollen can scarcely be used in the experiment. After the operation, the plant will require all the sun, rain, and air that it can have. The plants, indeed, which are intended to stand for seed should be treated somewhat differently from those planned for flowering only, by planting them in a separate bed, in a very open situation. They must not be shaded with nets, as this like-

wise prevents the ripening of the seed. About the middle of July the seeds will be fit to gather, as will appear by the stalks becoming dry and withered. When the seed vessels begin to open, they should be cut off, with about six inches of the stem, and the seeds preserved in the pods till the time of sowing, taking care to keep them dry, to prevent mouldiness, which would hinder them from vegetating. *Taking up the bulbs.*—As soon as the flower falls the seed pods must be removed just at the top of the stalk, for if they remain, the plants will continue in a growing state, and exhaust the vigour of the bulbs, which will prove greatly injurious to their blooming fluently the following season. On the other hand, when the seed pods are removed, the leaves soon become yellow and wither, and the bulbs, instead of being gorged with sap, become firm and ripe. The criterion of the exact time of taking up is when the stem becomes dry enough, three inches above the surface of the soil, to bend down without breaking. On being taken up they may be put in appropriate drawers or boxes, and be kept in the shade for a few days; but before the drawers are put away, the loose skins, fibres, and offsets, should be removed, only taking care not to peel off the innermost brown skin, which must remain on till the time of planting, otherwise the bulb will be too much dried and exhausted. The most convenient method for keeping the varieties distinct is to have shallow boxes divided into compartments for each bulb, and numbered to correspond with a written catalogue of names. These boxes may be placed in a cabinet having shelves for nine boxes, divided into a hundred and five compartments, in fifteen rows, seven in each row. These may be numbered along the sides, so as to correspond with the numbers of the rows in the bed, the advantage of which will be that either in planting out or taking up, the utmost correctness may be observed with respect to each individual bulb.

TUMOUR.—This is a word of very wide signification, and may be applied to any local enlargement, however simple or barmless in its character, or however grave or malignant in its consequences; as a tumour is simply a swelling, any morbid enlargement of a part, whether the slow growth of a persistent evil, that after much pain and greater or less expense of time manifests itself in the form of an outward bulging or enlargement, or it may be the swelling, that springs up almost instantly after a fall, bruise or blow; each, whether the disease that causes it be a concussion against a door in the dark, as a swollen and black eye, or the slow development of a cancerous mischief, is equally a tumour. It would be quite out of place in a practical daily work like this, to enter minutely upon the many varieties of tumours which surgeons have enumerated, and which are only of consequence to the medical man himself, and would confuse the general reader. Except those swellings which are the result of blows, falls, or immediately follow an accident, and are those only, indeed, with which

we shall give any special direction for treatment, all tumours have for simplification been divided into two classes, *sarcomatous* and *encysted*. In other words, fleshy, inelastic, firm swellings, without any apparent inflammation, attended with little or no pain, a sense of dull weight in the part, and excessively sluggish in their growth, though when once excited proceeding rapidly to assume other and more important characters; and the other case, swellings or tumours, consisting of firm fibrous sacs, like gutta-percha balls of varying size, containing a fluid that, through all the superstructure of skin and adipose substance, can be felt to fluctuate. Each of these divisions has several varieties or orders, as the simple *fatty tumour*; the indolent growth known as *goitre* or *wen*; and the most dangerous of all, the *fungus haematoëdes*. In all varieties of either of the two classifications, as the patient's health at the time has much to do with the successful treatment, a surgeon should be consulted as to the best system to adopt for the cure of the disease; as, by an error of practice, a *simple tumour* might be converted into a *malignant disease*. For ordinary tumours or swellings, the result of accident or inflammation, the best mode of treatment is the soothing system of warm or hot fomentations, especially so when situated over a joint. In such cases, where there is any hope to disperse the swelling before running into the stage of suppuration, a warm solution of sugar of lead, half an ounce of the sugar of lead to a quart of warm water, with which a gill of vinegar has been mixed, is one of the best of applications. When, however, throbbing has set in, accompanied with increased pain and heat of the part, and constitutional tremors, such treatment is no longer of any avail, and must be set aside; matter, in that case is forming, and it must be encouraged by hot fomentations of chamomile flowers, or poppy-heads, and continued till the abscess is sufficiently forward to be opened. For the ordinary and common tumours, that occur on the head or face, from blows or falls, the extract of lead applied on lint for a few times, is generally the only remedy needed; sometimes indeed, when not early attended to, leeches are demanded, but if the lead is applied early, they will never be required.

TUNBRIDGE CAKES.—Rub six ounces of butter quite smooth into a pound of flour, then mix in six ounces of sugar, beat and strain two eggs and make the above into a paste. Roll it out very thin and cut it with the top of a glass into eakes; prick them with a fork, and cover with caraways, or glaze with the white of an egg, and dust a little white sugar over. Bake them in a moderate oven.

Butter, 6ozs.; flour, 1lb.; sugar, 6ozs.; eggs, 2; caraways and sugar, sufficient.

TUNBRIDGE PUFFS.—Put into a nicely tinned saucepan a pint of milk, and when it boils, stir into it as much flour as will make it a thick batter; add three well-beaten eggs, and two or three drops of oil of cinuanmon, or any other seasoning; dust a

large flat plate with flour, with a spoon throw on it the batter in the form of balls or fritters, and drop them into boiling clarified dripping or lard. Serve them with pounded loaf sugar strewed over. The batter may be made into a pudding, adding with the eggs an ounce of salt butter. Boil, and serve it with a sweet sauce.

TUNING FORK.—In tuning the notes of a musical instrument, such as the piano-forte, the first point is to fix upon some one note, by the pitch of which all others may be determined. The only way of retaining a permanent pitch for use is by having an instrument which tune will not alter. A standard pitch is usually obtained, or professed to be obtained by the tuning fork, an instrument consisting of two steel prongs, extending from a steel handle. When these prongs are sharply struck, they vibrate, and if the instrument be then held to the ear, or placed upon the flap of a table, or any other sound-board, a low and pure sound is heard, if the prongs be perfectly equal. These tuning forks are usually made to sound either C or A.

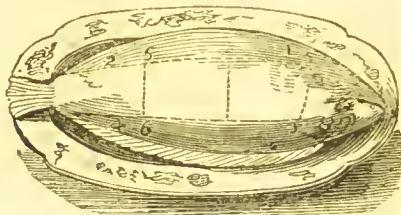
TURBOT.—This is the best of all our sea fish, and is taken on the south and east coasts of England in great numbers, and also of Norway and Holland. It is a broad flat fish, thick and fleshy, with a gelatinous skin, which is highly esteemed. The consistence of the flesh should be firm and curdy, without being hard or woolly; and it is better kept for a couple of days in a cool place.

TURBOT BAKED.—Butter the inside of the dish whieh is to contain it, and sprinkle it with a mixture of beaten pepper, grated nutmeg, chopped parsley, and a little salt; pour in a pint of white wine. Cut off the head and tail of the turbot, and lay it in a dish; sprinkle it with the same sort of mixture with which you did the dish, and pour over it another pint of wine. Stick small bits of butter all over the fish, dredge a little flour, and strew crumbs of bread. When baked of a fine brown, lay it on the dish; stir the sauce in the baking-dish all together; put it into a saucepan, and shake in a little flour; add a bit of butter and two spoonfuls of soy or ketchup when it boils; and when it again boils, pour it into a tureen and serve it up. The dish may be garnisbed with scraped horseradish, or slices of lemon.

TURBOT BOILED.—Make a brine with a handful or two of salt, and a gallon or more of water; let the turbot lie in it two hours before it is to be boiled, then set on a fish kettle with water enough to cover it, and about half a pint of vinegar, or less if the turbot is small, and put in a piece of horseradish; when the water boils, put in the turbot, the white side uppermost, on a fish plate; let it be done enough, but not too much, whieh will be easily known by the look; a small one will take twenty minutes, a large one half an hour; then take it up, and set it on a fish plate to drain, before it is laid on the dish, with lobster sauce or white sauce.

TURBOT FRIED.—It must be a small turbot, cut across as if it were ribbed; when it is quite dry, flour it, and put it in a large frying-pan with boiling lard sufficient to cover it; fry it till it is brown, then drain it. Or with sauce made thus: clean the pan, put into it almost enough sherry to cover it, anchovy, salt, nutmeg, and a little ginger; put in the fish, and let it stew till half the liquor is wasted; then take it out, and put in a piece of butter rolled in flour, and a minced lemon; let them simmer till of a proper thickness; rub a hot dish with a piece of shallot; lay the turbot on the dish, and pour the sauce over it.

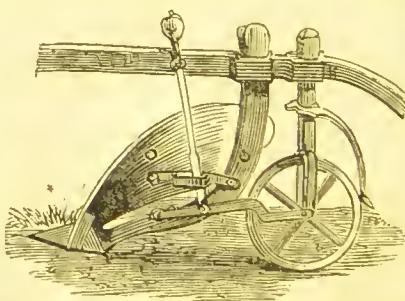
TURBOT, TO CARVE.—The fish should be placed with the underpart uppermost on the dish, so that this may be assisted in preference. Make an incision from 1 to 2, and another from 3 to 4; then cut from between



5 and 6, which is the prime part. When the whole of this side is served, assist the upper part, raising the backbone with the fork, while the fish-knife is used for the flesh; this is more solid and less delicate. The fins are much esteemed.

TURBOT, TO CHOOSE.—Turbot, and all flat fish, are rigid and firm, when fresh; the under side should be of a rich cream colour. When out of season, or too long kept, this becomes a bluish white, and the flesh soft and flaccid. A clear bright eye in fish is also a mark of being fresh and good.

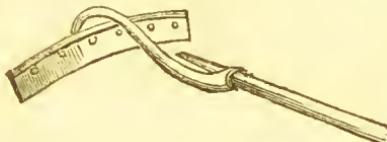
TURF CUTTER.—An implement employed for the purpose indicated by its name, is represented in the annexed engraving. In its general construction it resembles a



plough. To the free part of the beam are connected, through uprights carrying axles, two wheels, one on each side. At the back

of the basin is fitted a standard, which carries the axle of a third wheel. The axle is prolonged beyond the wheel on each side, and forged or affixed to it are two small cranks. To that before the hind wheel is fitted a curved bearer, which terminates at bottom in a share or parer, and to the support is affixed a mould-board. To each of the cranks on the axis of the hind wheel is connected a rod, the other end of which is fixed to a scraper or cleaver, which on the rotation of the wheels, travels to and fro, and clears and scrapes the share and mould-board. When the implement is regulated for the removing of turf, to a standard descending from the beam, just in the rear of the fore wheels, two cutters are fitted, one for cutting off the turf longitudinally, or in a line with that in which the implement is drawn, and the other for cutting it transversely, or in a line at right angles to that in which the implement advances. At bottom, the cutter standard terminates in a bow, which carries an axle, upon one end of which is keyed a circular disc. On the axle, and between the bow, is affixed a cutter for making the cross cut. Upon the implement going forward, the circular disc revolves, makes a continuous cut, and carrying round the other cutter with it, causes it to cut once with every revolution of the disc.

TURF SCRAPER.—A plate of iron fixed at right angles across the end of a long



handle, used chiefly to scrape off earth or the exuviae of worms, snails, &c., from lawns, grass verges, or walks, early in the spring. In some cases, teeth, like those of a saw, are formed in the edge of the blade of such scrapers, in order to tear out the moss from lawns.

TURFING.—This operation consists in laying down turf on surfaces intended for lawns, in parterres or pleasure-grounds. The turf is cut from a smooth firm part of an old sheep pasture, free from coarse grasses; in performing this operation, the ground is first crossed by parallel lines about a foot asunder, and afterwards intersected by others three feet asunder, both headed by a line and the turf-raser. Afterwards, the turf-spadic is employed to separate the undivided turfs, which are rolled up and conveyed to the spot where they are to be used. It is to be observed, that, in this case, all the sides of each turf are bevelled, by which means when they are laid down exactly as they were before being taken up, their edges will fit, and in some degree lap over each other, whereby, after rolling, a more compact surface will be formed. The surface on which the turfs are to be laid ought previously to be either dug or trenched, so as to be brought to one degree

of consistency, and then rolled, so that it may not afterwards sink; the turfs being laid in such a manner that they may fit, are to be first beaten individually, and then watered and rolled till the whole is smooth and even. Edgings of turf are generally two feet broad, or upwards. The turfs being cut in regular portions, with the edges or sides of each turf perpendicular, and the two ends oblique in the slope, they are to be placed so that the one may fit exactly to the other. They are next to be beaten with the beetle, afterwards watered, and again beaten or rolled till they become very nearly level with the gravel; and finally, a line is applied to their edges and the raser used to cut them off periodically.

TURKEY BOILED.—Make a stuffing with grated bread, oysters chopped, grated lemon-peel, pepper, salt, nutmeg, about four ounces of butter or suet chopped, a little cream, and yolk of egg to make it a light stuffing; fill the craw. If there is any left, make it into balls. Flour the turkey, put it into water while cold; take off the scum as it rises; let it boil gently; a middling-sized turkey will take about an hour. Boil the balls, lay them round it with oyster sauce on the dish and in the boat. The stuffing may be made without oysters; or it may be stuffed with forcemeat, or sausage-meat mixed with a few crumbs of bread and yolks of egg. If oysters are not to be had, white celery sauce is very good, or white sauce.

TURKEY BONED.—Take a small, well-kept, but quite sweet hen-turkey of from seven to eight pounds weight, and remove, by the receipt for a fowl, all the bones, except those of the pinions, without opening the bird; draw it into shape, and fill it entirely with exceedingly fine sausage-meat, beginning with the legs and wings; plump the breast well in preparing it, and when its original shape is restored, tie it securely at both ends, and at the extremities of the legs; pass a straight iron skewer through these and the body, and another through the wings and body; then lay a twine over the back of the turkey, and pass it under the ends of the first skewer, cross it in the centre of the back, and pass it under the ends of the second skewer; then carry it over the pinions to keep them firmly in their place, and fasten it firmly at the neck. When a cradle spit is not at hand, a bottle jack will be found more convenient than any other for holding the turkey; and after the hook of this is passed through the neck, it must be further supported by a string running across the back and under the points of the skewer which confines the pinions to the hook, for otherwise its weight would most probably cause it to fall. Flour it well, place it far from the fire until it is heated through, and baste it plentifully and incessantly with butter. An hour and three quarters will roast it well. Break the bones into pieces for gravy in a pint and a half of water or good veal broth, with a little salt, a few slices of celery, a dozen corns of pepper, and a bunch or two of parsley. Brown gently in a piece of

fresh butter, a couple of ounses of lean ham ; add to them a slight dredging of flour and a little cayenne, and pour to them the broth from the bones ; after it has boiled for an hour, and has been strained and skimmed, shake the stewpan well round, and stew the gravy until it is wanted for the table ; clear it entirely from fat, strain and serve it very hot. A shallot or half an oniou may be browned with the ham, when either is liked, but their flavour is not, we think, appropriate to poultry.

TURKEY BROILED.—On the rump, gizzard, and a drumstick, put pepper and cayenne ; let them be broiled, and brought to table as hot as possible ; cut them in small pieces, pour over them a ladleful of mustard, ditto of melted butter, a spoonful of soy, ditto ol' lemon-juice, and some of the gravy out of the dish ; mix quickly, and hand round. Fowls may be treated in the same way.

TURKEY GIBLETS.—The giblets consist of the pinions, the claws, the neck, liver, and gizzard. Seal'd the whole, and put them into a stewpan with some butter, a bunch of parsley, elives, a clove of garlic, two cloves, thyme, bay leaf, basilic, mushrooms, put all on the fire with a spoonful of flour, moisten the whole with water or stock, season with salt and pepper ; stew till done, then take out the bouquet, and add three yolks of eggs, warm, but do not let it boil or it will curdle. You can vary the flavour by adding turnips or potatoes sliced.

TURKEY HASHED.—Mix some flour with a piece of butter, stir it into some cream and a little veal gravy, till it boils up, cut the turkey in pieces, not too small, put it into the sauce, with grated lemon-peel, white pepper and mace pounded, a little mushroom powder or ketchup, simmer it up. Oysters can be added.

TURKEY PATTIES.—Minee some of the white part with grated lemon, nutmeg, and a little salt, white pepper, cream, and a little butter warmed ; fill the patties, and bake as usual.

TURKEY PIE.—Break the bones of a turkey, and beat it flat on the breast. Lard it with bacon, lay it in a dish with some slices of bacon under it, and season it well with salt, pepper, nutmeg, and cloves. Lay a slice of bacon over it, cover it with a crust, and bake it.

TURKEY PULLED.—Skin a turkey ; take off the fillets from the breast, and put them into a stewpan with the rest of the white meat and wings, side-bones, and merrythought, with a pint of broth, a large blade of mace pounded, a shallot mineed fine, the juice of half a lemon, and a roll of peel, some salt, and a few grains of cayenne ; thicken it with flour and butter, and let it simmer for two or three minutes till the meat is warm. In the mean time, score the legs and rump, powder them with pepper and salt, broil them nicely brown, and lay them on or round the pulled chicken. Three tablespoonfuls of good cream, or the yolks of as many eggs, will be a great improvement to it.

TURKEY ROASTED.—When trussed for roasting, cut the liver to pieees, and set it over the fire in a stewpan, with half a pint of oysters washed, and their liquor, which must be strained, some pepper and salt, two bay leaves, two blades of mace, a piece of butter rolled in flour ; let these stew very gently about ten minutes, and then take them off, singe the turkey, and stuff it with the oysters, cover the paper over it, spit it and lay it down to a good lire, but at a distauee ; while it is roasting, set on a stewpan, with half a pint of essence of ham ; take a pint of oysters, throw them into boiling water, remove the beard, then put them into the essence of ham ; add a little lemon-juice, give them a boil. When the turkey is done and in the dish, pour the sauce over it.

TURKEY SAUCE.—Open a pint of oysters into a basin, wash them from their liquor, and put them into another basin. Pour the liquor, as soon as settled, into a saucepan, and put to it a little white gravy, and a teaspoonful of lemon pickle. Thicken with flour and butter, and boil it three or four minutes. Put in a spoonful of cream, and then the oysters. Shake them over the fire till quite hot, but do not let them boil.

TURKEY STEWED.—Choose a small turkey and boue it, fill it with a forcemeat made as follows :—Take nearly a pound of veal and the meat of two pigeons, a tongue out of the pickle, boiled and peeled, chop all these ingredients together, and beat them in a mortar with some marrow from a beef bone, or a pound of suet from a loin of veal ; season them with two or three cloves, two or three blades of mace, and half a nutmeg dried at the fire, and pounded with some salt ; mix all these well together, fill the turkey, and fry it of a fine brown ; put it into a pot that will just hold it, lay some skewers at the bottom of the pot, to keep the turkey from sticking ; put in a quart of good stock gravy, cover it close, and let it stew for half an hour, very gently ; put in a glass of port wine, one spoonful of ketchup, a large spoonful of pickled mushrooms, and a piecee of butter rolled in flour, cover it close, and let it stew half an hour longer, fry some hollow French loaves ; then take some oysters, stew them in a saucepan with a bit of mace, their liquor, a little sherry, and a piecee of butter rolled in flour, let them stew, till they are pretty thick ; fill the loaves with them, lay the turkey in a dish, pour the sauce over it, and lay the loaves on each side.

TURKEY STUFFING.—Take the foregoing composition for the roast turkey, or add the soft part of a dozen oysters to it, an anchovy, or a little grated ham or tongue, if you like it, is still more relishing. Fill the craw of the turkey, but do not cram it so as to disfigure its shape. Pork sausage meat is sometimes used to stuff turkeys ; or fricd, and sent up as a garnish.

TURKEY, TO CARVE.—In carving a turkey, it should not be divided till the breast is disposed of ; but if it be thought proper to divide, the same process may be followed

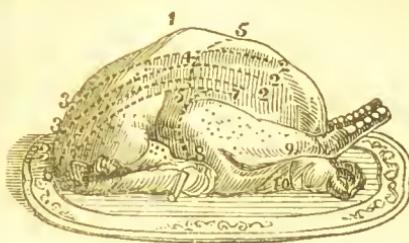
as directed for a fowl. The following is the best mode of carving this bird:—Cut slices from the breast in the direction of 2 2 2 and from 4 to 3. Sever the four quarters, and

the outside of the side bones, and push the skewer through, and the same on the other side. Put the liver and gizzard between the pinions, and turn the point of the pinion; another skewer through the body of the bird.

TURKEY WITH TRUFFLES.—Take two pounds of truffles, brush them well, skin them, and chop them fine. Take all the fat you can find in the turkey; put in a saucépan a piece of butter, the truffles, salt, and spices; let them stew about ten minutes; add the parings of the truffles chopped, and the fat of the turkey pounded, and some bacon also pounded. Put all this into the turkey to stuff it, taking care to close it well, so that the stuffing should not escape. Roast the turkey, and serve it with truffles warm or stewed. It must stew gently in some stock which will serve for the same, and which you thicken with flour browned in butter and the parings of the truffles.

TURKEY EGGS, TO DRESS.—Though of a large size, they are delicate in flavour, and are equally valuable for the breakfast-table, cooked simply in the shell, or for compounding any of the dishes for which hen's eggs are commonly in request. They make super-excellent sauce, omelettes, custards, and puddings; and are especially to be recommended poached, or served by any other of the following receipts. Those of the smallest size and palest colour, which are the eggs of the young birds, are the best adapted for serving boiled in the shells; they are sometimes almost white. Those of the full-grown turkeys are thickly speckled, of a deep tawny hue or fawn colour. Six minutes will render the whites firm; four minutes will poach them.

TURKEYS, TO REAR.—When turkey chicks first come forth, they are extremely weak, and much assiduous care is necessary to rear them. The first thing to be attended to is, to remove them to a situation where they are not exposed to the sun's rays, which at first are too powerful for them. A woody place is the most suitable to their natural habits. Nothing is so destructive to them as rain, from which they must be protected. When young turkeys accidentally get wet, they should be brought into a house, carefully dried by applying soft towels to them and placed near a fire, and fed upon bread which has been mixed with a small proportion of ground pepper or ginger. It should be made up in the form of small peas. If the bread is too dry for this purpose, it may be moistened with a little sweet milk. Should the turkey-poults refuse to eat it, a few of these pellets may be forced down their throats. Even heavy dews prove destructive to them, and frost is no less injurious in its effects. These must, therefore, be most carefully guarded against when the hens incubate in March or early in April. Dry and sandy situations are most congenial for breeding turkeys, and especially elevated situations, where large woods are contiguous. A male turkey is sufficient for twelve or sixteen females, although the former number is probably the safest to



divide the thighs from the drumsticks which, being tough, should be reserved to the last. A thin slice of the forcemeat which is under the breast should be given to each person. The finest parts of a turkey are the breast, neck bones, and wings.

TURKEY, TO CHOOSE.—A turkey-cock, if young, has smooth black legs with a short spur, the eyes full and bright, and the feet limber and moist. Observe that the spurs are not cut or scraped: an operation often performed to deceive the unwary. A hen turkey is known to be fresh by the same rules; if she is old, her legs will be red and rough; if she is with eggs, the vent will be soft and open; if the vent is hard, she has no eggs.

TURKEY, TO PREPARE.—When the bird is picked carefully, break the leg-bone close to the foot; hang on a hook, and draw out the strings from the thigh; cut the neck close off to the back, taking care to leave the crop-skin long enough to turn over the back: remove the crop, and loosen the liver and gut at the throat end with the middle finger. Cut off the vent, remove the gut, pull out the gizzard, with crooked wire, and the liver will soon follow: but be careful not to break the gall. Wipe the inside perfectly clean with a wet cloth; then cut the breast-bone through on each side close to the back, and draw the legs close to the crop; then put a cloth on the breast, beat the thigh bone down with a rolling-pin till it is flat. If the turkey is to be trussed for boiling, cut the first joint of the legs off; pass the middle finger into the inside, raise the skin of the legs, and put them under the apron of the bird. Put a skewer into the joint of the wing and the middle joint of the leg, and run it through the body and the other leg and wing. The liver and gizzard must be put in the pinions, care being taken to open and previously remove the contents of the latter; the gall bladder must also be detached from the liver. Then turn the small end of the pinion on the back, and tie a packthread over the ends of the legs, to keep them in their places. If the turkey is to be roasted, leave the legs on; put a skewer in the joint of the wing, tuck the legs close up, and put the skewer through the middle of the legs and body; on the other side put another skewer in at the small part of the leg. Put it close on

prevent sterility in the eggs, which is frequently the case with those of turkeys. Eggs should never be intrusted to the care of a female until she is at least two years of age; and hens may be kept for the purpose of incubation till they reach their tenth year. The largest and strongest hen's eggs should be kept for this purpose. During the time the hen is sitting it becomes necessary to place food near her, as otherwise, from her assiduity, they may be starved to death, as turkey-hens seldom move from their nest during the whole time of incubation. Where farmers rear turkeys in great numbers, they do not indulge the hen by allowing her to sit as soon as she has done laying, but keep them from her until all the other hens have ceased to lay, as it is of consequence that they should all be hatched about one time. When turkey-hens are uneasy during this interval, they may be indulged with hen's eggs. When they have all ceased to lay, each of them is provided with a nest ranged close to the wall, in a barn or other convenient place, and each is supplied with from sixteen to twenty of her own eggs. The windows and doors are then closed, and only opened once in the twenty-four hours for the admission of air, and for the purpose of feeding the hens. They are taken off their nest, fed and replaced, and again shut up. On the twenty-sixth day, the person who is intrusted with the management of the birds, examines all the eggs, and removes those that are addled, feeds the hens, and does not again disturb them till the poult's have emerged from their shells and have become perfectly dry, from the heat of the parent bird; as to be subjected to cold at this time would certainly kill them. When the young birds are thoroughly dried, two of the broods are joined together, and the care of them intrusted to a single hen; and those which have been deprived of their offspring are again placed on hen's or duck's eggs, and subjected a second time to the tedious operation of incubation, in which ease it is not unusual for them to bring out thirty eggs. We cannot recommend this practice in point of humanity; for the poor hens, when they have accomplished their second sitting, are literally reduced to skin and bone, and frequently so weak as hardly to be able to walk. As before hinted, great care should be taken of the young poult's; besides warmth, proper food, and shade, the nearer they are to a pure running stream the better, as they drink a great deal, and nothing is of greater importance to their being successfully reared than fresh drink. They must be also carefully protected from strong gusts of wind, and on the slightest appearance of a thunder-storm, should be immediately taken into a house. They should get no food for twenty-four hours after they leave their eggs. Their first food should be hard-boiled eggs finely chopped, and mixed with crumbs of bread. Curd is also an excellent food for them. When they are about a week old, boiled peas and minced scallion are given to them. If eggs are continued, the shells should be mince down with their food to assist digestion, or some very coarse

sand or minute pebbles. They should be fed thrice a day, and as they get older a mixture of lettuce-milk will be found beneficial, together with minced nettles. Barley boiled in milk is another excellent food at this period, and then oats boiled in milk. In short, the constitution of young turkeys requires at all ages every kind of stimulating food. When about three weeks old, their meat should consist of a mixture of minced lettuce, nettles, curdled milk, hard-boiled yolks of eggs, bread, and dried eamomile; but when all these cannot be readily obtained, part of them must be used. Fennel and wild endive, with all plants which are of a tonic character, may be safely given to them. Too much lettuce, however, has been found to be injurious. When poult's are about a month old, they should be turned out along with their parent bird into the fields or plantations, where they will find sufficient food for themselves. Grass, worms, all kinds of insects, and snails are their favourite food, and nature dictates to them such vegetables as are conducive to their general health. As their feet are at first very tender, and subject to inflammation from the pricking of nettles and thistles, they ought to be rubbed with spirits, which has the effect of hardening the skins and fortifying them against these plants. The glandulous fleshy parts and barbels of their heads begin to develop when they are from six weeks to two months old. This is a critical period with the poult's, and unusual care must be bestowed on them, as they now become weak, and often sickly. A little brine mixed with their food will be found very beneficial, or spirits much diluted with water. A paste made of fennel, pepper, hemp-seed, and parsley, has been found an excellent remedy when afflicted with an inflammation of the wattles, to which they are liable when growing. They are very subject to this if the weather happens to be broken or changeable at the time these tubercles are growing. These parts swell and grow very red, which frequently proves fatal to them. If, therefore, such be the state of the weather at this critical period, the paste above recommended should be given although they are perfectly healthy, and it will be found an excellent preventive. When the inflammation becomes very great, recourse is often had to bleeding in the axillary vein, which frequently effects their recovery. Soon after the turkey-poult's have acquired their first feathers, they are liable to a disease which is very fatal to them if not attended to. This temper produces great debility, and the birds appear languid and drooping, and almost totally neglect their food. Their tail and wing feathers assume a whitish appearance, and their plumage has a bristled aspect. This is occasioned by a disease in two or three of the rump-feathers. On examination, the tubes of these will be found filled with blood. The only remedy for this disease is to pluck them out, when the bird will speedily acquire its wonted health and spirits. In fattening turkeys for the table, various methods are resorted to. Some feed them on barley-meal mixed with skim-milk,

and confine them to a coop during this time; others merely confine them to a house; while a third class allow them to run quite at liberty, which latter practice, from the experience of those on whose judgment we can most rely, is by far the best method. Care should, however, be taken to feed them abundantly before they are allowed to range about in the morning; and a meal should also be prepared for them at mid-day, to which they will generally repair homewards of their own accord. They should be fed at night, before roosting, with oatmeal and skim-milk; and a day or two previous to their being killed, they should get oats exclusively. We have found from experience that when turkeys are purchased for the table, and cooped up, they will never increase in bulk, however plentifully they may be supplied with food and fresh water; but, on the contrary, are very liable to lose flesh. When feeding them for use, a change of food will also be found beneficial. Boiled carrots and Swedish turnips, or potatoes mixed with a little barley or oatmeal, will be greedily taken by them. A cruel method is practised by some to render turkeys very fat, which is termed cramming. This is done by tearing a paste of crumbs of bread, flour, minced suet, and sweet milk, or even cream, made into small balls about the bulk of a marble, and passed over the throat after full voluntary meals.

TURMERIC.—Under this term are comprised many species of the *curcuma* genus of plants. Of the broad-leaved turmeric, the tubers are aromatic, and are used by the Hindoos, not only as a stimulating condiment and a medicine, but as a perfume. Its sensible properties are much like those of ginger, but not so powerful. It is employed in the East in cases of disease, as colic, cramp, torpor, &c., where stimulants are required. It is a native of Bengal, China,

sionally wild, and it is also extensively cultivated in China, Java, Malacca, and in Bengal, prospering in a moist but not swampy soil. The Chinese sort is most esteemed, rather on account of its superior richness in colouring matter than from any other cause. Two varieties are found in commerce — the round turmeric and long turmeric. Turmeric possesses an acrid volatile oil, giving it aromatic qualities which render it useful in languid habits, where digestion is difficult and circulation slow. It is of some importance as a dye; but it is as a condiment, both in the East and in this country, that it merits notice, as it is an ingredient in all curry powders and curry paste.

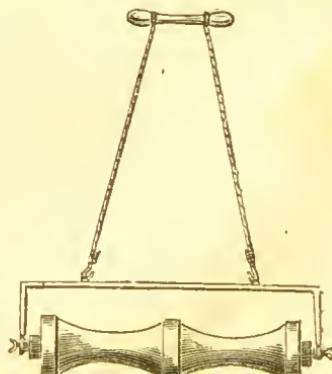
TURNIP, CULTURE OF.—The varieties of turnip commonly grown may be arranged as whites or yellows. Of white turnips, by far the best and most generally cultivated is the globe. Of yellow turnips, there are the field or Aberdeen yellow, which is more hardy than the globe, and answers well for succeeding that variety in spring. The choice of sorts may be considered as limited to the white globe, yellow, and Swedish, according as early, middling, or late supplies are wanted. The preparation of the land for the turnip crop is a matter of considerable importance. Immediately after harvest, the land should be deep ploughed, and care be taken that no water is allowed to remain on the surface. In the following spring, after the sowing of the sprig corn, the land being sufficiently dry, the preparation must be resumed; that will be in the latter end of May, or the beginning of June. The land must then be cross-ploughed, and well worked over with the harrows in every direction, to thoroughly clean it. The land having been thoroughly prepared and reduced to a fine even tilth, it is formed into



and various other parts of Asia and of the Asiatic islands. Some of the other species yield a kind of ginger, and some a kind of arrow-root. The common turmeric is occa-

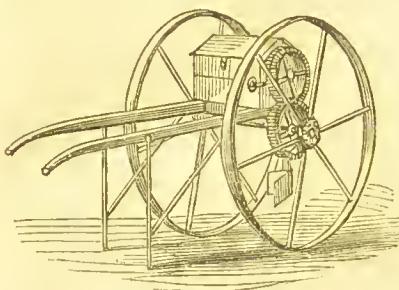


drills, or single-out ridglets, from twenty-seven to thirty inches from centre to centre.



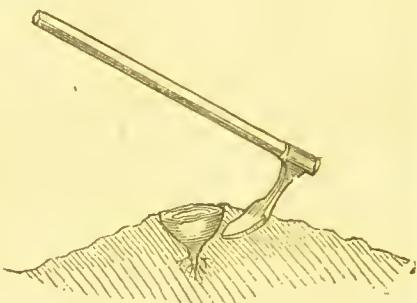
The manure is then brought in single-horse

carts, and evenly placed at the bottoms of the furrows. This being done, a double mould-board plough splits the ridge between the furrows and covers the manure, as seen in the engraving. A light roller, which covers the drills, and, therefore passes twice over the same ground, is then passed over the tops of the ridges, to flatten and compress them; the seed is then sown by means of a small seed barrow drill attached



to it. It is a very simple machine, and works very well. A box, supported on two wheels, contains the seed, and revolving in it is a small brush similar to a seed machine. The brush forces the seed through a small perforated plate; a coulter, moving in front, opens a small drill, into which the seed falls; the earth is then raked over the seed by a forked piece of iron or a link of a chain. Enough seed should always be sown to allow for the frequent loss from the attacks of insects and other contingencies. About two pounds to an acre will be enough. After the sowing is completed, the plants generally make their appearance in about ten days or a fortnight, according to circumstances. When they are in rough leaf, and about three inches high, the process of horse-hoeing commences, to destroy any weeds that may have come up two or three days afterwards; they are then hand-hoed, and pieced out into spaces about ten inches or a foot apart. After that they must be singled: that is, out of every bunch of plants left when pieced off, the strongest must be selected and allowed to remain; the rest are pulled up. This operation must be carefully done, and the earth brought up to the roots of the plants left. As soon as the weeds again appear, the hoe must be again at work, and again, if necessary, until the broad leaves of the plant quite cover the ground. When the bulbs are well formed, or bottled, as it is called, a double mould-board plough is passed between the rows to earth them well up; but this must not be done to excess, as the deep furrows are inconvenient when the sheep are feeding. The culture of the turnip is then concluded. Towards the end of October, or the beginning of November, when the pastures fail, the turnips may be used for food, either as food for sheep on the ground where they grew, or they may be carried on to pasture lands, or to the home-

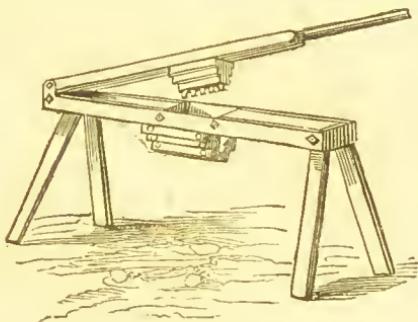
stead for other stock; or they may be stored for after use. If the latter plan be adopted, they should be removed from the field before the frost touches them. When sheep are to be fed, the turnips are either pulled up by the hand, and carried away, as wanted, into the fields in which the sheep are kept, and there spread regularly upon the ground; or more frequently and economically, the sheep are at once driven into the fields of turnips, and suffered to consume the roots as they stand. In this case, the animals are not suffered to range over the whole field, at first, but are confined to a space of an acre or more, by means of nets, or a series of moveable rails or hurdles. When the sheep have eaten the roots very nearly, the remnant in the ground may be picked up by a turnip-picker, such as seen in the accom-



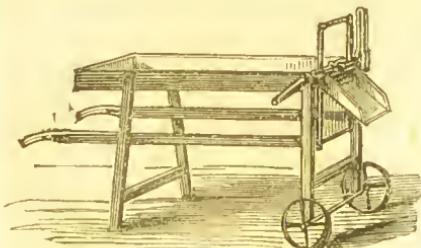
panying figure. By its mode of action, the top root of the turnip is cut through, and the shell separated from the ground at one stroke. The turnip crop is liable to a variety of casualties, more especially in the early state of its growth, either from want of moisture when the seed germinates, or afterwards from the attacks of the turnip-fly, a species of beetle that attacks the young plants. It is considered safe from this when the leaves appear rough. A vigorous growth, therefore, is the most likely thing to escape its ravages. There are often insects that attack the plants in its later stages, but not so frequently. They are also subject to a species of blight or canker, which prevents their growing. The roots, instead of enlarging, form excrescences, and are distasteful to cattle. A maggot is formed in them when they begin to decay. This destructive disease is well known, and is generally called "tingers and toes." If it appears very prevalent in a particular locality, it is better to substitute some other crop for a time, and it will disappear entirely. Previous to turnips being stored, the tap-root and top leaves must be removed; but not so as to injure the bulb. Turnips may be stored either in covered buildings, in pits, or in heaps; the latter plan is preferred. The heaps should be about eight feet wide at the base, of any length, and piled as high as they will stand; the heap is then thatched with straw, and secured with straw ropes. Taking up and replacing is a mode by which turnips have been pre-

served by some growers. The mode is to cart the turups from the field where they grow to a piece of ground near the farm offices, before the winter rains set in, when, the tap-root being cut off, the plants are set on the surface of the ground, in an upright position, as close to each other as they can stand, when they keep much better than in a store during the whole season. The advantages of having them quite close to the homestead, in place of bringing them, most probably, from a distant part of the farm in wet or stormy weather, are sufficiently obvious to justify the practice. To raise turnip seed, the usual mode is to select the most approved specimens of the variety to be raised at the season when they are full grown; and either to remove all others from the field, and leave them to start into flower-stems next year, or to transplant them to a place by themselves, where they will be secure from the farina of other plants of their genus. In either case, they must be protected by earthing up from the winter's frosts and rains, and, in the ripening season, from the birds.

TURNIP CUTTER.—When cattle are fed off turnips, it is necessary to cut the turnip in order to avoid waste, and to render it



more readily eatable. For this purpose, a turnip cutter, such as seen in the engraving, is called into use. A similar kind of implement, known as the turnip slicer, is also much used, and is illustrated in the annexed engraving. It is easily moved from place



to place on two small wheels, drawn along by means of two handles. It is sufficiently effective to supply sliced turnips to a small flock of sheep, and is particularly convenient

for use where a few sheep are placed by themselves, such as tups in the corner of a grass field, or ewes in a paddock at the period of lambing. The instrument consists of a wooden frame, supporting a trough, together with the cutting apparatus. The frame is formed of four posts, spreading a little below. Each part is connected by cross-rails, and they are connected longitudinally by the bars, which form also the handles of the wheelbarrow: being bolted to the posts at a suitable height for that purpose. A pair of wheels, of cast iron, fitted to an iron axle, which is bolted to the front parts, gives it the convenience of a wheelbarrow. The trough, into which the turnips are laid for cutting, has a sloping continuation in front of the cutters, for throwing off the sliced turnips. The cutting apparatus consists of a grooved frame of iron, in which the compound cutter moves up and down by means of the lever handle. A forked support is bolted by a pin to the further side of the wooden frame, and at the extremity of the fork a swing link is jointed. The lower end of the link is jointed to the extremity of the lever, which is likewise forked, forming its fulcrum; and the gridiron cutter is also jointed by its top bar to the lever. While the point, therefore, of the cutter moves in a parallel line, by its confinement of the grooves in the frame, the fulcrum is allowed to vibrate on the joint of the swing link, thus allowing an easy vertical motion to the cutter through the full range of its stroke.

TURNIP PIE.—Season some mutton chops with salt and pepper, reserving the ends of the neck bones to lay over the turnips, which must be cut into small dice, and put on the chops. Add two or three spoonfuls of milk, also a sliced onion, if approved, and cover with a crust.

TURNIP SOUP.—Take from a knuckle of veal all the meat that can be made into cutlets, and stew the remainder in five pints of water, with an onion, a bundle of herbs, and a blade of mace. Cover it close, and let it simmer over a slow fire four or five hours. Strain it, and set it by till the next day. Then take the fat and sediment from it, and simmer it with turnips, cut into small dice, till tender, seasoning it with salt and pepper. Before serving, thicken with flour and cream.

TURNIP TOPS, TO BOIL.—Gather young turnip tops in the spring; wash and drain well; put them into plenty of boiling water, with a little salt; boil for twenty minutes, or a little longer; then take them out, and serve plain after draining them; or chop them fine, and mix them with a little butter, pepper, and salt.

TURNIP WINE.—Take a large number of turnips; pare and slice them; then place in a cider press, and obtain all the juice you can. To every gallon of juice add three pounds of lump sugar and half a pint of brandy. Pour into a cask, but do not bung until it has done working; then bung it close for three months, and draw off into another cask. When it is fine, bottle and cork well.

TURNIPS BOILED.—Pare them, taking care to remove all the inner rind, put them into the saucepan with the meat you are cooking, either whole or cut in halves; young turnips will require three-quarters of an hour, and if they are middle-aged, one hour and a quarter. Old ones should never be used when they are to be eaten with the meat, for they are stringy and bitter; indeed, they should be cautiously used even for soup.

TURNIPS MASHED.—When they are boiled quite tender, squeeze them as dry as possible between two trenchers, put them into a saucepan, mash them with a wooden spoon, and rub them through a cullender, add a little bit of butter, keep stirring them till the butter is melted and well mixed with them, and they are ready for table.

TURNIPS STEWED.—After they have been washed, wiped quite dry, and pared, slice the turnips nearly half an inch thick, and divide them into dice. Dissolve an ounce of butter for each half-pound of the turnips, put them in as flat as they can be, and stew them very gently indeed, from three-quarters of an hour to a full hour. Add a seasoning of salt and white pepper when they are half done. When thus prepared, they may be dished in the centre of fried or nicely boiled mutton cutlets, or served by themselves.

TURNIPS, TO PRESERVE.—The best way is to stack them up in straw in the following manner:—One load of any sort of dry straw is sufficient for an acre of fifty tons weight. Pull up the turnips, top and tail them, then throw them in a sort of windrow, and let them lie a few days to dry. First place a layer of straw next the ground, and upon it a layer of turnips about half a yard thick, then another layer of straw, so go on alternately with a layer of straw and a layer of turnips; every layer grows narrower, till it comes to a point at the top, like a sugar-loaf. The last layer must be straw, which serves to keep all dry. You must observe always when you have laid a layer of turnips, to stroke or lap over the ends of the under layer of straw, in order to keep them close or from tumbling out. The heap should be as large as a hay-cock; the tops may be given to sheep or cattle as they are cut off.

TURNOVER.—Roll some paste out quickly, nearly half an inch thick, and cut it into pieces, about five inches wide. Lay a small quantity of any kind of preserved fruit, jam, or marmalade on them, double them over, and cut them into squares, triangles, crescents, or any shape you like, closing them very neatly by wetting and pinching them at the sides. Lay them, with paper, on a baking tin, ice them the same as pies and tarts, and bake them about twenty minutes, taking care not to discolor the icing. The following makes a good paste for fruit turnovers. Rub a quarter of a pound of butter in one pound of flour, make a hole in the middle, and put in a little water, two yolks and one white of egg, work them all up to a proper consistency and roll out for use.

TURPENTINE.—A substance of various kinds, chiefly an exudation from different species of pines. Common turpentine is the fluid resinous exudation from the Scotch fir, and others of the pine tribe. From this the valuable oil of turpentine or spirits of turpentine, as it is frequently called, is obtained by distillation, the dry substance which remains constituting the resin. Oil or spirits of turpentine is a valuable remedy either externally or internally. In the former case, if applied to the skin, by means of cloths soaked in it, it is a powerful counter-irritant, acting like mustard, and sometimes even blistering. It is often employed for purposes of counter-irritation in inflammatory diseases in the abdomen. When thus used it should be warmed, by placing the pot or bottle containing the turpentine in hot water. In rheumatic affections, lumbago, sciatica, &c., turpentine is a valuable addition in liniments. Internally it acts as a remedy for renal complaints, for worms, hemorrhage, &c.

TURTLE SOUP.—Hang up the turtle, the night before it is to be dressed, cut off its head, or a weight may be placed on its back, to make it extend itself, after which cut off its head and fins. In the former case it must bleed freely. When dead, cut the belly part clean off, sever the fins at the polut, take away the white meat, and put it into spring water. Draw, cleanse, and wash the entrails, scald the fins, the head, and the belly shells; saw the shell about two inches deep all round, scald and cut it in pieces; put the shell, head, and fins into a pan, cover them with veal stock, add shallots, thyme, savory, marjoram, parsley, a little basil, cloves, mace, and a nutmeg; chop the herbs, and pound the spice very fine, stew it till tender, then take out the meat, and strain the liquor through a sieve. Cut the fins in three pieces, and take all the brown, as the meat is called, from the bones, and cut it in neat square pieces. Melt butter in a stewpan, and put the white meat to it, simmer it gently till nearly done, then take it out of the liquor, and cut it in pieces about the size of a goose's egg. Cover the bowels, lungs, heart, &c., with veal stock; add herbs and spices as before, and stew them till tender. The liver must be boiled by itself, being bitter, and not improving the colour of the other entrails, which should be kept as white as possible. The entrails being done, taken up, and cut in pieces, strain the liquor through a sieve. Melt a pound of butter in a stewpan large enough to hold all the meat; stir in half a pound of flour, put in the liquor, and stir the whole till well mixed. Make a number of forcemeat balls. Put to the whole three pints of Madeira, a high seasoning of cayenne pepper, salt, and the juice of two lemons. The deep shell must be baked, whether filled or not, as the meat must be either browned in the oven or with a hot iron. The shell being thus filled, the remainder is to be served in tureens. In filling up the shells and tureens, a little fat should be put at the bottom, the lean in the centre, and eggs and forcemeat balls, with part of the entrails, on the top.

TWELFTH-CAKE. — Two pounds of sifted flour, two pounds of sifted loaf sugar, two pounds of butter, eighteen eggs, four pounds of currants, half a pound of almonds blanched and chopped, half a pound of citron, one pound of candied orange and lemon-peel cut into thin slices, a large nutmeg grated, half an ounce of ground allspice; ground cinnamon, mace, ginger, and coriander, a quarter of an ounce of each, and a gill of brandy. Put the butter into a stewpan, in a warm place, work it into a smooth cream with the hand, and mix it with the sugar and spice in a pan (or on a paste board) for some time, then break in the eggs by degrees, and beat it at least twenty minutes; stir in the brandy, and then the flour, and work it a little, add the fruit, sweetmeats, and almonds, and mix all together tightly; have ready a hoop cased with paper on a baking plate, put in the mixture, smooth it on the top with your hand dipped in milk, put the plate on another, with saw-dust between, to prevent the bottom from colouring too much; bake it in a slow oven four hours or more, and when nearly cold ice it. If made in cold weather, the eggs should be broken into a pan, and set into another filled with hot water, likewise the fruit, sweetmeats, and almonds, laid in a warm place; otherwise it may chill the butter, and cause the cake to be heavy.

Flour, 2lbs.; **sugar**, 2lbs.; **butter**, 2lbs.; **eggs**, 18; **currants**, 4lbs.; **almonds**, $\frac{1}{2}$ lb.; **citron**, $\frac{1}{2}$ lb.; **orange and lemon-peel**, 1lb.; **nutmeg**, 1; **allspice**, $\frac{1}{2}$ oz.; **cinnamon**, mace, ginger, coriander, $\frac{1}{2}$ oz. each; **brandy**, 1 gill.

TYPHIUS, OR NERVOUS FEVER. — This disease, sometimes denominated jail, hospital, or camp fever, is usually divided into two varieties, *typhus minor*, or low nervous fever, and *typhus gravior*, or putrid fever; both forms being highly contagious.

Mild typhus, or low nervous fever. — This disease is indicated by lassitude, depression of spirits, loss of appetite, cold chills, and hot flushes, pains in the head, back, and limbs, nausea, and sometimes sickness, confusion of ideas, difficult and anxious respiration, pulse weak, small, and quick, occasionally intermittent. The tongue, at first moist and white, becomes coated with a dark brownish fur, and when protruded, is attacked with tremor. As the disease advances, the heat on the surface increases, the tongue becoming dry, hard, and brown, or unnaturally red; the mind grows more confused, and the ideas still more dis-associated, a low muttering delirium sooner or later supervening, attended with flushed face and redness of the eyes, with more or less of throbbing of the temporal arteries: at the same time all the secretions are suppressed, and the skin feels hot and dry. In severe cases, all the symptoms become exaggerated, and a deep coma terminates the case. The predisposing causes of typhus are either a delicate and nervous state of body, strong depressing emotions of the mind, impure air, and bad living, or exposure to great heats and colds. The direct or imme-

diate cause is contagion. In the treatment of typhus, as in all other fevers, the first object of the physician is to reduce the heat and febrile symptoms, by unloading the stomach and acting on the bowels; for this purpose an emetic of fifteen grains of ipecacuanha and one grain of tartar emetic, mixed in a little warm water, should be given as early as possible, and the vomiting encouraged by frequent draughts of warm water. As soon as the emetic has ceased to act, a dose of Epsom salts should be administered, and if necessary, repeated in three or four hours; and when the bowels have been moderately, but sufficiently acted on, two tablespoonfuls of the following mixture are to be given every six hours. Take of —

Solution of acetate of ammonia	2 ounces
Syrup of saffron	2 drachms
Mint water	6 ounces
Spirits of nitre	2 drachms
Antimonial wine	3 drachms

Mix. Should the heat of the skin continue unabated, the body should be hastily sponged with cold vinegar and water, and the patient returned to bed undried. As bleeding from the system—unless adopted in the earliest stage—is considered very questionable practice, any excessive action, either in the chest or head, must be met by local remedies, such as blisters or leeches. The head should be early shaved, or the hair cut close, and the scalp kept cool by bladders of pounded ice, or cold evaporating lotions, such as the following. Take of —

Sal ammoniae	3 drachms
Camphor water	1 pint
Nitre	1 drachm

Dissolve, and add

Ether	$\frac{1}{2}$ ounce
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Linen cloths wetted with this, are to be applied frequently to the scalp. At the same time that the head is kept cool, the feet are to be preserved of a steady heat by bottles of hot water. The patient is to be supplied with cold drinks, the room frequently and well ventilated, and sprinkled with vinegar or chloride of lime. In the first stages of the disease, the diet must be particularly mild and light, such as farinaceous foods; but as soon as the severity of the symptoms abates, the regimen must be altered, and the patient stimulated by a richer diet, by wine, and if necessary, spirits, to resist the consequences of the excessive debility that about the seventh or ninth day usually supervenes, and which, if not resisted, would eventuate in putrid fever, or what is known as *typhus gravior*, or malignant *typhus*. This, though frequently a sequence of the former disease, is very often a primary affection; in which case it is always much more sudden than the other form of typhus, more rapid in its progress, and infinitely more severe in all its symptoms; the heat of the skin is greater, the anxiety more excessive, the pains in the back, joints, and head far more acute; the tongue dark and furred, the pulse quick, small, and hard; the nausea

passes into retching, which ends in bilious vomiting; the breath becomes hot and fetid, and a blackish brown crust, called *sordes*, forms on the lips, teeth, and gums, while a prostrating debility attends every change. As the disease advances, blood either oozes from the gums or mouth, or is effused below the cuticle in drops, giving rise to the dark purple spots, called *patechiae*; the face becomes sharp and withered, a muttering delirium follows, the tendons of the wrist start up, and the patient picks at the bed clothes.

Treatment.—In the first stage, and to moderate the fever, the same treatment recommended in the former disease must be adopted, and any local symptom treated according to its severity, by blisters, leeches, or lotion. As, however, the debility is the most dangerous evil to be encountered, food and tonics must in this disease very early form a great and important part of the treatment; and considerable judgment is required to know at what exact period of time to commence the dietetic system. Beef tea or strong mutton broth, slightly thickened with a small quantity of sago, semolina, or tapioca, must be administered in a few tablespoonfuls at a time every quarter of an hour; and when the patient is too weak to help himself, or becomes unconscious from the nervous state of the head, the mouth must be opened by pressing with the fingers of the left hand the cheeks, between both jaws, till the muscular rigidity is overcome, and the teeth part sufficiently in front to admit the introduction of a spoon; and the same amount of nourishment administered every fifteen minutes. Concurrent with the nourishment, though at different times, doses of the following tonic mixture are to be given either every two, three, or four hours, according to the amount of debility or prostration existing.

Take of—

Infusion of quassia	5½ ounces
Aromatic confection	½ drachm
Compound tincture of valerian	2 drachms

Mix, and add ten grains of quinine dissolved in half an ounce of water, and thirty drops of diluted sulphuric acid. Mix thoroughly, and give a tablespoonful to commence with for a dose, increasing the quantity, according to circumstances, to two or more spoonfuls. The debility is often so excessive, though tonics and nourishment are freely administered, that it becomes necessary to use the most powerful stimulants at the same time, to rouse the system from the state of putrescence into which it is frequently lapsing. For this purpose, ammonia, camphor, ether, opium, wine, and brandy are, either separately or united in a mixture or draught, the remedies to which the physician looks to save his patient from the fatal prostration that characterises the end of the disease. When the pulse is hard and quick, the tongue dry, the breathing oppressed and difficult, much thirst, and a flushed hot skin, as a general, but not invariable rule, stimulants are *inadmissible*; while a moist tongue, a

weak compressible pulse, and cold extremities, urgently *demand* their use. When wine is given, it should be either as strong negus, or neat in half glasses at a time; the spirits should be always given in water, either alone or with fifteen drops of sal volatile and five of ether in each dose of about a wineglassful; or the wine and brandy may be administered separately, and alternated with a dose of the following mixture, being a combination of all the other stimulants. Take of—

Camphor water	5 ounces
Sal volatile	1 drachm
Laudanum	1 drachm
Aromatic tincture	½ ounce
Ether, spirits of	1 drachm

Mix. One or two spoonfuls to be taken either every two or four hours. The bowels are to be kept gently open by a calomel and colocynth pill, followed by a teaspoonful of Epsom salts dissolved in a tumbler of water; and all the local remedies advised in the former disease are, as the symptoms require, to be adopted in this: the body sponged when necessary, the room well ventilated, and the atmosphere frequently purified by burnt vinegar, chloride of lime, or disinfecting liquids. Saline, effervescent, or acidulated drinks are to be given frequently; and besides the diet that the stage of the disease may demand, fresh ripe fruits, baked apples or pears, may be eaten at any time when the patient's appetite enables him to do so. In no disease is the after treatment during convalescence more difficult, and in none does it demand more time, care, and judgment, than in putrid typhus.

U.

UDDER AND TONGUE PIE.—Parboil a tongue and an udder, slice them tolerably thin, and season them with pepper and salt. Put a puff paste round the edge of a dish, place a layer of udder and tongue at the bottom, then some stoned raisins, followed by another layer of udder and tongue until the dish is filled. Cover the top with a crust, bake the pie, remove it from the oven, and pour in the following sauce. Beat up some yolks of eggs with vinegar, white wine, sugar, and butter. Shake them over the fire till on the point of boiling, and pour it into the pie just previously to being sent to table.

UDDER, WITH TONGUE.—After cleaning the tongue well, salt it with common salt and saltpetre three days, then boil it, and with it a fine young udder with some fat to it, till tolerably tender; then tie the thick part of one to the thin part of the other, and roast the tongue and udder together. Serve them with good gravy, and currant jelly sauce. A few cloves should be stuck in the udder.

ULTRAMARINE.—This is a well-known blue pigment of extraordinary beauty, and great permanence. Ultramarine was originally prepared from the lakes lazuli or lazulite. This mineral presents itself in small masses of granular structure, in a rock of heterogeneous structure; this rock, which in commerce is called lapis, sells for a higher or lower price for pigments, according to the proportion of lazulite which it is found to contain. The most perfect specimens of lazulite are used as gems; while the less perfect are used in the preparation of ultramarine. The lazulite is made red hot, quenched, pounded to powder, washed, dried, made into a paste with pure linseed oil, and certain resinous substances, kneaded, diffused in hot water, and allowed to settle until the ultramarine (leaving all the other ingredients) falls to the bottom. The whole of these processes require great care. This colour is now prepared at a very moderate price, and is equal in beauty to that obtained from the lazulite. The artificial ultramarine is stated to be prepared by adding freshly precipitated silica and alumina mixed with sulphur, to a solution of caustic soda, and the mixture is to be evaporated to dryness; the residue is put into a covered crucible and exposed to a white heat, by which, when the air has partial access to it, a dark pure blue mass is obtained; the product is then reduced to impalpable powder. The proportion of materials to be used is, about thirty-six silica, thirty-six alumina, twenty-four soda, and three sulphur.

UMBRELLA.—The variable climate of England renders an umbrella a very useful and indeed almost indispensable article of possession; and these articles are now so conveniently made, that they may be carried about and occasion no more inconvenience than an ordinary walking-stick. The best and most expensive umbrellas are made of silk, and, with proper care, they will last for years; others are made of alpaca, and are a good substitute for silk; and a third kind, the cheapest and commonest, are manufactured from gingham. In purchasing an umbrella, it is a question whether it is better to select an expensive or a cheaper one, because these articles are so peculiarly liable to be lost or stolen. On the other hand, it should be borne in mind that the possession of a good umbrella will induce a person to be careful of it, and thus to retain it in his possession when a common one would be lost. Some persons object to carrying umbrellas on the score of trouble, but in point of fact this trouble is imaginary, and not greater than the wearing of a hat. It is certain that a person who is always provided with an umbrella need not fear the weather, and he is also spared those disagreeable contingencies—the chance of getting wet, encroaching under another person's umbrella, or being under the necessity of borrowing one, consequently involving the trouble of returning it, and possibly, as is the case nine times out of ten, inconveniencing the lender by neglecting to return it. Those who disdain the

use of umbrellas, generally appear with shabby hats, soiled bonnet ribbons, wrinkled silk dresses, &c., the consequence of frequent exposure to unexpected showers, to say nothing of colds taken, and other kinds of indisposition. Umbrellas may be made to last a longer time than ordinarily by proper care. When not in use, they should be enveloped in an oilskin case, which may be purchased at the shops where umbrellas are sold. It is important that the handle of the umbrella should terminate with a hook, so that it may be hung up, instead of being laid about in corners, on tables, &c., and thus lost. This hook should also be a natural continuation of the handle, and not fastened on, as, under this condition, it is frequently coming loose and falling off. If the umbrella is wet, do not unfurl it for the purpose of drying it more rapidly. If you do, the whalebones acquire a peculiar set, which it is almost impossible to obviate; they become permanently bent, in consequence of the shrinking of the cloth while drying, and give the umbrella, when closed, a bulging and unseemly appearance. Umbrellas manufactured with steel ribs, should not be kept tightly done up when not in use, as the continual pressure of the steel ribs on the material cause it to wear through those parts, and in the course of time, produces a fracture. It is prudent to keep two umbrellas, one for your own use, and one to lend in emergencies, for it is proverbial that borrowed umbrellas are never returned, or if returned, not until they are half worn out, and the immediate call for them has gone by.

USQUEBAUGH.—Usquebaugh is a strong compound liquor, chiefly taken by way of dram; it is made in the highest perfection at Drogheda, in Ireland. The following are the ingredients, and the proportions in which they are to be used: take of best brandy, one gallon; raisins stoned, one pound; cinnamon, cloves, nutmeg, and cardamoms, of each, one ounce; rind of one Seville orange, and brown sugar candy, one pound. Shake these well every day, for at least fourteen days, and it will, at the expiration of that time, be ready to be fined for use.

V.

VACCINATION.—This operation is so easily taught, learned, and practised, that trifling attention to a few simple rules may render any person a benefactor to his neighbourhood. Vaccination is constituted by the introduction of matter beneath the skin, in consequence of which a little bladder of peculiar appearance is formed, and passes through various stages, till the progress of vaccination is complete. The younger the lymph, the greater its intensity. The lymph of a fifth-day vesicle, when it can be obtained, never fails. It is, however, equally powerful

up to the eighth day, at which time it is also most abundant. After the formation of areola, the true specific matter of cow-pox becomes mixed with variable proportions of serum, the result of common inflammation; and diluted lymph is always less efficacious than the concentrated virus. After the tenth day the lymph becomes inulaiginous, and scarcely fluid, in which state it is not at all to be depended on. Infantile lymph is more to be depended on than the lymph obtained from adults. For the proper performance of vaccination, let the lancet be exceedingly sharp, and if fresh lymph is to be used, its point must be introduced into the vesicle of the child near at hand, in such way as to bring out upon it some lymph without drawing blood, and is then to be inserted into the arm of the child to be vaccinated. It should penetrate the skin to a considerable depth. In making the incision the skin should be held perfectly tense between the forefinger and the left hand. The lancet should be held in a slanting position, and the puncture made from above downwards. With lymph of ordinary intensity, five vesicles should be raised, and these should be at such distance from each other as not to become confluent on their advance to maturation. About the third day a blush appears distinctly at the vaccinated points; by aid of the microscope, the effluence surrounding the inflamed point will be distinctly seen even on the second day. On the fifth day, the scar skin is elevated into a pearl-coloured vesicle, containing a thin and perfectly transparent fluid in minute quantity. The shape of the vesicle is circular or oval, according to the mode of making the incision. On the eighth day the vesicle is in its greatest perfection; its margin is tinged, and sensibly elevated above the surrounding skin. In colour, the vesicle may be yellowish or pearly. The vesicle possesses the indented form characteristic of small-pox. On the eleventh day the areola begins to fade, leaving in its decline two or three concentric circles of a bluish tinge. Its contents now become opaque, the vesicle itself begins to dry up, and a scale forms, of a circular shape and of a brown or mahogany colour. By degrees this hardens and blackens, and at length, between the eighteenth and twenty-first day, drops off, leaving behind it a scar of a form and size proportioned to the prior inflammation. A perfect vaccine scar should be of a small size, circular, and marked with radiations and indentations. These show the character of the primary inflammation, and attest that it has not proceeded beyond the desirable degree of intensity. Until the eighth day the constitution seldom sympathises. At that period, it is usual to find the infant restless and uneasy. The bowels are disordered, the skin is hot, and the sleep disturbed. These evidences of constitutional sympathy continue for two or three days. There is, however, much variety observable now. Some children suffer lightly in their general health throughout the whole course of vaccination; others exhibit scarcely any indication of fever, although the areola be

extensive and the formation of lymph abundant. In this way vaccination is to be managed when the lymph can be obtained fresh from the vesicle of a child who is passing through the disorder. But it may happen that vaccination has to be performed where no fresh lymph is to be obtained; and it may have to be procured from a great distance, and much time may necessarily have to pass ere it arrives. To meet this emergency, there are various modes of conveying lymph. It may be collected in stoppered bottles, and in little glass bulbs, which will do well enough for two or three days; ivory points, when well armed and carefully dried, are very effective. In vaccinating with a point, which is a piece of ivory shaped like a very narrow lancet, the proceeding is rather different from vaccinating with fresh matter. The point having been chosen, the dried lymph upon it must be moistened by breathing upon it a few times. Punctures in the skin are to be made with a lancet in the same way as already directed, and then the point having been breathed on again, must be passed into each wound thus made, and gently pressed, so as to transfer the lymph from the point to the wounds. During the progress of vaccination, care should be taken that the vesicle is not burst or injured; for if it be, the progress of the disorder cannot be watched, nor its having passed through its proper course ensured.

VALERIAN.—This is a herb, or undershrub, possessing many valuable qualities. It is a native of Europe, and by the sides of rivers, and in ditches, and moist woods is abundant in Great Britain. The root has a very strong smell, which is dependent on a volatile oil. It is very attractive to cats,



and also to rats, and is employed by rat-catchers to destroy rats. It is also employed in medicine at the present day. The root, or more properly, the rhizoma, with its root

fibres, is used in medicine. The medicinal action is chiefly due to the volatile oil and extractive.

VALET.—The valet in small families is expected to assist as footman also; but his particular province is to attend exclusively to the personal accommodation of his master. Upon him he waits during all times that the toilet is being made; preparing and arranging every article that may be required; brushing and folding clothes, &c. The wardrobe is also placed under the care of the valet, and it is his duty to see that all necessary repairs are done. For wet weather, when his master may come in from riding or walking, the valet should be always prepared, by having ready the necessary changes of linen and clothes, and by being himself in waiting to remove the damp clothing, and to prevent its being injured in the drying. In preparing for journeys, the valet should endeavour to ascertain the probable time of his master's absence, that he may be able to provide a sufficiency of linen and other clothing. At the inns, he takes charge of these supplies, and, as at home, places everything in readiness for the periods of dressing and undressing. Besides this, if his master be unattended by his footman, it is his duty to attend to his accommodation generally, as well as his dressing-room. Whenever his master needs his services, he must be at hand; even at table, if more than ordinary attendance be required, he must be ready to wait. By these requisites it will be seen that a valet should be handy and versatile. A good education will be found of great service in a situation of this nature; and a knowledge of French, German, and other European languages, will be found to enhance considerably the services of the valet who possesses it.

VANILLA.—As the greater portion and the finest kinds of the vanilla of commerce, are imported from Vera Cruz, the most important species must be natives of Mexico. The fruit is the only part of the plant that is used. It has a balsamic odour, and a warm agreeable flavour. For these properties it is indebted to a peculiar volatile oil, and to a considerable quantity of benzoic acid. The fruit is gathered when it gets yellow, and it is first allowed to ferment for two or three days, it is then laid in the sun to dry, and when about half dried, it is rubbed over with the oil of cocoa; it is again exposed to the sun to dry, and oil again a second time. The fruit is then collected in small bundles, and wrapped up in the leaves of the Indian reed. Neither in Guiana nor in Mexico is the vanilla plant cultivated, but the fruit is collected by the natives, who sell it to the Europeans.

VANILLA CREAM.—Boil one ounce of isinglass in a pint of milk, for ten minutes, taking care it does not stick to the bottom of the stewpan. Put into it half a stick of vanilla, cover it down, and let it stand till nearly cold. Beat up the yolks of five eggs, mix into them six ounces of pounded sugar, put these into a stewpan; take the vanilla out of the milk, which add to the eggs.

Mix them well and stir the custard over the fire till it thickens, but do not let it boil. Strain it into a bowl; keep stirring it, and when on the point of setting, add three pints of cream well whipped, mix it well, and pour it into a mould, set it upon ice till wanted, when dip it for a moment into warm water, wipe it dry, and turn over upon a dish.

VANILLA CUSTARD FROTHED.—Sweeten and flavour one pint of milk with vanilla. Beat the whites of seven or eight eggs to a stiff froth; and when the milk boils, take out a tablespoonful of the froth and let it set in the milk, turning it once. Put it on a sieve to drain, then another, and another. When there is a sufficient quantity, strain the milk, and make it into a custard in the usual way, eight or nine eggs to a pint of milk. Put the custard, when cold, into a glass dish, and place the frothed whites upon it.

VARNISH, FOR BASKETS.—Take either red, black, or white sealing-wax, whichever colour you wish to make; to every two ounces of sealing-wax, add one ounce or spirit of wine, pound the wax fine, then sift it through a fine lawn sieve, till you have made it extremely fine, put it into a large phial with spirits of wine, shake it, let it stand near the fire forty-eight hours, shaking it often; then with a little brush, rub your basket all over with it, let them dry, and do them over a second time.

VARNISH, FOR CARDWORK.—Before varnishing cardwork, it must receive two or three coats of size, to prevent the absorption of the varnish and any injury to the design. The size may be made by dissolving a little isinglass in hot water, or by boiling some parchment cuttings until dissolved. In either case the solution must be strained through a piece of clean muslin, and for very nice purposes should be clarified with a little white of egg. A small clean brush, called by painters a sash tool, is the best for applying the size, as well as the varnish. A light delicate touch must be adopted, especially for the first coat, lest the ink or colour be started or smothered.

VARNISH, FOR DRAWINGS.—Boil some parchment in clear water, in a glazed pipkin, until it becomes a fine clear size; strain and keep it for use; give your work two coats, observing to do it quickly and lightly. When dry, apply the varnish.

VARNISH, FOR GRATES.—Melt four pounds of common aspaltum, and add two pints of linseed oil, and one gallon of oil of turpentine. This is usually put up in stone-ware bottles for sale, and is used with a paint brush. If too thick, more turpentine may be added.

VARNISH, FOR PAPER HANGINGS.—The cheapest kind is ordinary turpentine varnish, which can be bought for three shillings a gallon. Another kind is paper or crystal varnish, the price of which is six shillings per gallon, but owing to the great proportion of turpentine which these contain, they are not to be depended on for use

or durability. The best low-priced varnish that can be used for the purpose is oak varnish, which costs from ten to twelve shillings per gallon. The body of this consists chiefly of oil; it is therefore durable, not apt to crack, and presents a smooth glossy surface. In all cases the wall should have two coats of size before the varnish is laid on.

VARNISH, FOR SEALING WAX.—The method of making the varnish or japan is very easy, being simply reducing the wax to a coarse powder, and pouring the best spirits of wine on it in a bottle, and letting it gradually dissolve without heat, shaking the bottle occasionally, till it is all dissolved. A two ounce stick of the best wax will be enough for a quarter of a pint of spirits. Recollect that much depends on the goodness of the sealing wax, and that you may vary the colour of the varnish by using different coloured wax. As this varnish dries very quickly, it should not be made until it is wanted for use.

VARNISH, TO POLISH.—Take two ounces of tripoli powdered, put it in an earthen pot with water to cover it, then take a piece of white flannel, lay it over a piece of cork or rubber, and proceed to polish the varnish, always wetting it with the tripoli and water. It will be known, when the process is finished, by wiping a part of the work with a sponge and observing whether there is a fair even gloss. When this is the case, take a bit of mutton suet and fine flour, and clean the work.

VARNISH, WHITE.—The white varnish used for toys is made of sandarac, eight ounces; mastic, two ounces; Canada balsam, four ounces; alcohol, one quart. This is white and drying. Varnish for objects of the toilet table, such as work-boxes, card cases, &c., is made of gum sandarac, six ounces; elemi (genniuie), four ounces; animi, one ounce; camphor, half an ounce; rectified spirit, one ounce. Melt slowly. These ingredients may, of course, be lessened in proportion.

VASES, FOR FLOWERS.—Vases of many forms, rustic or classic, may be introduced with good effect for containing flowers in pots, or otherwise; being raised on stone pedestals, or any other appropriate point which the garden or its adjuncts may afford. The rustic vase should have the ornamental part made of plaited osiers nailed on rough wood. The classical vase may be obtained in an endless variety of shapes in cast-iron or composition, to resemble tree-stone.

VEAL A LA BOURGEOIS.—Cut lean pieces of veal, lard them with bacon, and season with pepper and salt, beaten mace, cloves, nutmeg, and chopped parsley. Put slices of fat bacon into a stewpan, lay the veal on them, cover the pan, and set it over the fire for eight or ten minutes to heat it. Then with a brisk fire brown the veal on both sides, and shake some flour over it. Pour in a quart of good gravy, cover close, and stew it gently till done. Take out the slices of bacon, skim off the fat, and beat

up the yolks of three eggs with some of the gravy. Mix all together, and stir one way till smooth and thick, take it up, lay the meat in a dish, and pour the sauce over it. Garnish with lemon, and serve hot.

VEAL A LA MODE.—Take about eleven pounds of the breast of veal, cut it into pieces of three or four ounces each, put three or four of dripping; mince a couple of large onions, and put them into a large deep stewpan; as soon as it is quite hot, flour the meat, put it into the stewpan, keep stirring it with a wooden spoon; when it has been on about ten minutes, dredge it with flour, and keep doing so till you have stirred in as much as you think will thicken it; then cover it with boiling water (it will take about a gallon), adding it by degrees, and stirring it together; skim it when it boils, and then put in one drachm of ground black pepper, two of allspice, and two bay leaves; set the pan by the side of the fire, or at a distance over it, and let it stew very slowly for about three hours; when you find the meat sufficiently tender, put it into a tureen, and it is ready for table.

VEAL BLANQUETTE.—Take the remains of roast veal, cut it in small pieces, or mince it fine, having cut off the outside skin, melt in a stewpan a piece of butter, some flour, salt, pepper, and a bundle of parsley; warm the veal in this sauce, having added a little white stock, or some milk seasoned with nutmeg and mace. Just before you serve, have the yolks of three eggs well beaten with the juice of a lemon; add this to the blanquette, let it warm, but not boil, or the eggs will curdle. Serve hot with sippets of bread. You may vary the flavour by leaving out the parsley and using lemon-peel. Blanquettes of chicken or turkey are made the same way. Occasionally you might leave out the yolks of eggs and add stock, with the flour browned, and a few pickled mushrooms.

VEAL BOILED.—Veal must be put in plenty of boiling water, and be most carefully skimmed, or it will look dirty and brown. Some cooks use a fourth part of milk, and this has an advantage in avoiding the extraction of the juices. The time is in accordance with the general rule. The parts boiled are the knuckle, the fillet, stuffed as for roasting, and the breast with its sweet-bread. Bacon or ham are eaten with it; and for sauce, either parsley and butter, or white sauce, or by some people, onion sauce. The water in which veal is boiled makes good stock with additions; but if milk is used, it soon turns sour.

VEAL BOMBARDED.—Cut out the bone of a fillet of veal, and fill up the place with a good forcemeat. Then make cuts all round the fillet, at about an inch distance from each other. Fill one with forcemeat, another with boiled spinach, a third with crumbs of bread, chopped oysters, and beef marrow, and so on. Wrap the caul close round it, and put it into a deep pot, with about a pint of water. Make a paste to lay over it. When taken out of the oven,

skim off the fat, and put the gravy into a stewpan with a spoonful of mushroom ketchup, one of lemon-pickle, five boiled artichoke bottoms cut into quarters, two spoonfuls of browning, with half an ounce of morels and truffles.

VEAL BOUILLON.—Take a slice of veal, with a slice of ham or bacon; set them in a stewpan for half an hour, turning both to procure a nice colour; then have in the soup-pot some boiling water, put in the meat, add onions, carrots, and half a pound of beef to help the flavour, and let it stew slowly till done; skim it well. If for invalids, leave out the bacon and beef, and add chervil or rice.

VEAL, BREAST, COLLARED.—Take a breast of veal, pick off all the fat meat from the bones; beat up the yolks of two eggs, and rub it over with a feather; take some crumb of bread, a little grated nutmeg, some beaten mace, and a little pepper and salt, a few sweet herbs, a little lemon-peel cut small, and strewed over it; put a thick skewer into it to keep it together; roll it up tight, and bind it very close with twine; roll a veal caul over it, and roast it an hour and a quarter; before it is taken np, take off the caul, sprinkle some salt over it, and baste it with butter. Let the fire be brisk, and the veal of a fine brown when it is takeu np; cut it into three or four slices, lay it in the dish, boil the sweetbread, cut it into slices, and lay round it; pour over it white sauce, which must be made as follows: a pint of good veal gravy, half an anchovy, a teaspoonful of mushroom powder; let it boil up, then put in half a pint of milk and the yolk of two eggs well beaten; just stir it over the fire, but do not let it boil or the milk will curdle; put in some pickled mushrooms just before it is sent to table.

VEAL, BREAST, FORCED.—To force the breast, cut the ends of the bones on both sides; raise the veal from the bones, and put on it a forcemeat with some veal pounded, some salsage-meat, parsley, shallots, salt, pepper, and nutmeg, all chopped; mix well together, and lay on the breast of veal; roll up the veal, and sew the meat with a large needle and twine, or coarse thread, to prevent the forcemeat escaping; lay slices of fat bacon at the bottom of the stewpan, and put in the breast of veal, with some stock, salt, pepper, and a bundle of herbs. At the end of three hours' slow stirring, take away the twine; after taking the meat out of the sauce, strain the latter, having carefully skimmed it; add a little flour, and, when warm, pour the sauce over the veal, and serve, garnished with lemon. Cut off the gristle before you cook this dish.

VEAL, BREAST, IN HOTCH POTCH.—Cut the brisket of a breast of veal into little pieces, and every bone asunder; then flour it, and put half a pound of butter into a stewpan. When it is hot, throw it into the veal; fry it all over a light brown, and then have ready a teakettle of boiling water; pour it into the stewpan, fill it up, and stir

it round; throw in a pint of green peas, a whole lettuce, washed clean, two or three blades of mace, a little whole pepper, tied in a muslin rag, a little bundle of sweet herbs, a small onion, stuck with a few cloves, and a little salt; cover it close, and let it stew an hour, or till it be boiled to your palate if you would have soup made of it; but if you would have any sance to eat with the veal, you must stew it till there be just as much as you would have for sauce, and season it with salt to your palate; take out the onion, sweet herbs, and spice, and pour it altogether into a dish. If you have no peas, pare three or four cucumbers, scoop out the pulp, and cut into thin pieces; then take four or five heads of celery, washed clean, and cut the white part small. When you have no lettuces, take the small hearts of savoys, or the little young sprouts. If you would make a very nice dish of it, fill the inside of the lettuce with forcemeat, tie the top close with a thread, and stew it till there be just enough for the sauce; set the lettuce in the middle, und the veal around; pour the sauce all over it; garnish the dish with rasped bread, made into figures with your fingers.

VEAL, BREAST, ROASTED.—Let the caul remain skewered over the joint till within half an hour of its being ready for table; place it at a moderate distance from a brisk fire, baste it constantly, and, in about an hour and a half, remove the caul, flour the joint, and let it brown. Dish, pour melted butter over it, and serve it with a cut lemon, and any other of the usual accompaniments to veal. It may be garnished with fried balls of the forcemeat, about the size of a walnut.

VEAL, BREAST, STEWED.—Cut a piece off each end, and make a forcemeat as follows:—boil the sweetbread, cut it very small, add grated bread, a little beef suet, two eggs, a little milk, some nutmeg, salt, and pepper; mix it well together, and stuff the thin part of the breast with some of it; the rest make up into little balls, and fry; skewer the skin close down, flour, and boil it in a cloth, in milk and water; make some gravy of the ends that were cut off, with half a pint of oysters, the juice of a lemon, and a piece of butter, rolled in flour. When the veal is done, put it in the dish; garnish with the balls, and pour the sauce over it.

VEAL, BREAST, WITH PEAS.—Cut a breast, or a portiou, in pieces, fry them with a little butter, an onion, and a cabbage lettuce, shred small. When browned, add a little flour; shake it well together; then add a small quantity of broth or water; let it stew gently. When the veal is three parts done, take a quart of peas, put them in water, and moisten them with a little butter, so that they adhere together; take away nearly all the gravy from the veal, and put in the peas. When both are done, add pepper, salt, and a little powdered sugar; thicken the peas with flour and butter; dish the veal, and pour the peas over. There should be very little saucc with peas.

VEAL BROTH.—Put two pounds of veal, with some sweet herbs, and ten peppercorns, into a clean tin saucepan, with four quarts of water; simmer to two quarts, and clear off the fat when cold. Add one onion, if approved. To remove the fat, take it off when cold, as clear as possible; and if there be still any remaining, lay a bit of clean blotting-paper on the broth when in the basin, and it will take up every particle; or, if the broth is wanted before there is time to let it get cold, put a piece of cork up the narrow end of the funnel, pour the broth into it, let it stand for a few minutes, and the fat will rise to the top; remove the cork, and draw off in a basin as much of the broth as is wanted, which will be perfectly free from fat.

VEAL CAKE.—Boil six eggs hard, cut in halves, and lay some of the pieces at the bottom of an earthenware pot; then shake in chopped parsley, some slices of veal and ham, about two inches square, and then eggs again, repeating the parsley and seasoning after each layer until the pot is full. Pour in sufficient water to cover it, lay about an ounce of butter on the top, tie it over with thick paper doubled, and bake about one hour. Then press close together with a spoon, and let it stand till cold. If put into a mould instead of the pot, it forms a handsome supper dish.

VEAL, COLD, TO DRESS.—Take a piece of veal that has been roasted (but not overdone), cut it into thin slices, take from it the skin and gristle, put some butter over the fire, with some chopped onions, fry them a little, then shake some flour over them; shake the pan round, and put in some veal stock, gravy, a bunch of sweet herbs, and some spice; then put in the veal with the yolks of two eggs; beat up with butter a grated nutmeg, some parsley shred small, some lemon-peel grated, and a little juice; stir it one way till it is thick and smooth, and put it in the dish.

VEAL COLLOPS.—Cut them about five inches long, not so broad, and not too thin; rub them with eggs, and strew over them crumbs of grated bread, parsley chopped, grated lemon-peel, pepper, salt, and nutmeg, with a few leaves of thyme shred small; set them before the fire in a Dutch oven, baste them, and, when nicely brown, turn them; thicken some rich gravy with some flour, add ketchup, cayenne, mushrooms, and hard yolks of eggs. Boil this up, and pour it over them.

VEAL CURRIED.—Cut part of a breast of veal in moderate sized pieces; put it in a stewpan with an onion and a shallot sliced fine, a slice of lemon, one ounce of butter, a little parsley, and thyme, and a tablespoonful of curry powder, mixed with the same quantity of flour; let the whole stew together until the meat is slightly brown; add sufficient broth or water for the sauce; let it boil gently till the veal is done; strain the sauce through a sieve, pour it over the veal quite hot, and serve with rice in a separate dish.

VEAL CUSTARD.—Pour, boiling, a pint of rich, clear pale veal gravy on six fresh eggs, which have been well beaten and strained; sprinkle in directly the grated rind of a fine lemon and a little cayenne, some salt, if needed, and a quarter of a teaspoonful of mace. Put a paste border round the dish. Pour in, first, two ounces of clarified butter, and then the other ingredients; bake the custard in a very slow oven, from twenty-five to thirty minutes, or until it is quite firm in the middle, and send it to table with a little good gravy. Very highly flavoured game stock, in which a few mushrooms have been steamed, may be used for this dish with great advantage in lieu of veal gravy; and a sauce made of the smallest mushroom buttons may be served with it in either case. The mixture can be baked in a whole paste, if preferred so, or in well buttered cups; then turned out and covered with the sauce before it is sent to table.

VEAL CUTLETS. Rich veal or game stock, 1 pint; fresh eggs, 6; lemon, rind of 1; mace, $\frac{1}{2}$ teaspoonful; salt and cayenne pepper, to season; butter, 2ozs.

VEAL CUTLETS.—Put the cutlets in a frying-pan, with salt, pepper, parsley, shallots chopped fine; moisten the whole with melted butter, and put the pan on a very quick fire. When the cutlets are done on one side, turn them on the other, till done enough; add a little flour, browned with butter. After you have taken out the cutlets, and a little stock, let it come to the boil, and pour the sauce over the cutlets.

VEAL CUTLETS, WITH BACON.—Raise the flesh entire from the upper side of the best end of a neck of veal, free it from the skin, and from the greater portion of the fat; slice it equally into cutlets, a little more than a quarter of an inch thick, brush them with eggs, strew them with fine bread crumbs, and fry them of a light brown. Toast, or fry apart, as many small slices of bacon as there are cutlets, and let them be trimmed nearly to the same shape; place them alternately on their edges round the inside of a hot dish (so as to form a sort of chain), and pour into the middle some rich gravy made in the pan, and very slightly flavoured with shallot; or, substitute for this some good mushroom sauce. Savoury herbs, grated lemon rind, nutmeg or mace, salt, and white pepper, or cayenne, should be mixed with the bread crumbs, in the same proportions, or they may be varied at pleasure. A cheek of bacon is best adapted to this dish.

VEAL, DIETETIC PROPERTIES OF.—This flesh contains a greater proportion of gelatine than lamb, and is much more difficult of digestion. In order to obtain good veal, the calf should be fed on the mother's milk until it is six weeks old; but, in consequence of the practice of feeding calves with milk adulterated with chalk, and other irregular methods adopted in rearing them, the flesh is deprived of its due proportion of fibrin, and its alimentary properties are thereby greatly deteriorated.

VEAL, FILLET, FRICASSEED.—Take some slices of cooked veal, and put them into a stewpan with water, a bundle of sweet herbs, a blade of mace, and let it stew till tender; then take out the herbs, add a little flour and butter boiled together, to thicken it a little; then add half a pint of milk, and the yolk of an egg, beat very fine; add some pickled mushrooms; but some fresh mushrooms should be put in first, if they are to be had; keep stirring it till it boils, and then add the juice of a lemon; stir it well to keep it from curdling, then put it into a dish, and garnish it with lemon.

VEAL, FILLET, ROASTED.—Take out the bone, and put a good roll of forcemeat under the flap, dividing first with a sharp knife the skin from the meat, sufficiently to admit the quantity required; secure it well, truss the veal firmly into good shape, place it at a distance from the fire at first, and baste it with butter. The outside will have a richer crust of browning if the meat be washed, wiped tolerably dry, and well floured, before it is laid to the fire. It should be carefully watched, and basted often, that the fat may not burn. Pour melted butter over it after it is dished, and serve with it a boiled cheek of bacon and a lemon. Roast it from three hours and a half to four hours and a half, according to its size.

VEAL, FILLET, STEWED.—Stuff it, half bake it with a little water in the dish, then stew it with the liquor, some good stock gravy, and a little sherry. When done, thicken it with flour; add ketchup, cayenne, a little salt, juice of lemon, boil it up and serve.

VEAL, FRICANDEAU.—This is usually stewed, or rather bruised, sufficiently tender to be bruised with a spoon, and requires no carving; but the fat (or under part of the fillet) attached to it, which is sometimes, but not invariably, served with it, may be carved in even slices.

VEAL GRAVY.—When all the meat has been taken from a knuckle of veal, divide the bones, and lay them in a stewpan with a pound of the scrag of a neck, an ounce of lean bacon, a bunch of parsley, a little thyme, a bit of lemon-peel, and a dessert-spoonful of pepper; add as much water as will cover them. Boil and skim it; stop the pot down close, and let it stand till cold; then strain it, and take the jelly from the sediments. Pound some mace fine, and boil it with two spoonfuls of water, and add to the gravy. If cream is to be put to it, do not add the salt until the gravy comes off the fire.

VEAL HARICOT.—Take a neck or breast of veal (if the neck, cut the bone short), and half-roast it, then put it into a stewpan just covered with brown stock gravy, and when nearly done, have ready a pint of boiled peas, cucumber pared, and two cabbage lettuces, cut in quarters, stewed in brown gravy, with a few forcemeat balls ready fried, put them into the veal, and then let them simmer; when the veal is in the dish, pour the sauce and peas over it, and lay the lettuce and balls round it.

VEAL, JOINTS OF.—The various joints of veal are illustrated in the accompanying

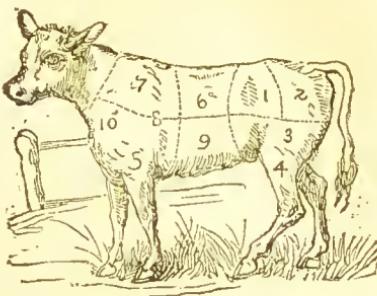
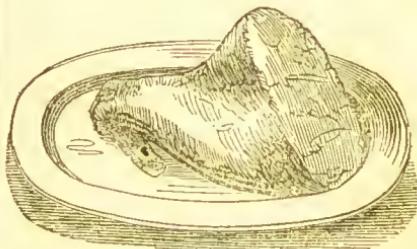


figure of a calf, and are as follows : 1. Loin, or best end. 2. Loin, chump end. 3. Fillet. 4. Hind-knuckle. 5. Fore-knuckle. 6. Neck, best end. 7. Neck, scrag end. 8. Blade bone. 9. Breast, best end. 10. Breast, brisket end. 11. Head.

VEAL, KNUCKLE, BOILED.—Veal should be well boiled. A knuckle of six pounds will take nearly two hours. The neck must be also well boiled in a good deal



of water; if it is boiled in a cloth, it will be white; pour over it parsley and butter, and serve with tongue, bacon, or pickled pork, or it may be stewed white.

VEAL, KNUCKLE, HASHED.—Boil a knuckle of veal till it is tender, then take a little of the liquor it was boiled in, and put it into a stewpan with a little milk, a blade of mace, one anchovy, a bit of lemon-peel; let these simmer till the anchovy is dissolved, then strain the liquor, and put in a little milk, with a bit of butter rolled in flour; cut the veal into thin slices, and let them stew together till the gravy is of a proper thickness, shake the pan round often; poach five or six eggs, and boil some small slices of bacon; lay the eggs upon the bacon round the veal, and lay chopped parsley between.

VEAL KNUCKLE RAGOUT.—Cut in small thick slices the flesh of a knuckle of veal, season it with a little fine salt and white pepper, flour it lightly, and fry it in butter to a pale brown, lay it into a very clean stewpan or saucepan, and just cover it with boiling water; skim it clean, and add to it a faggot of thyme and parsley, the white part of a head of celery, a small quantity of cayenne, and a blade or two of

mace; stew it very softly from an hour and three-quarters to two hours and a half. Thicken and enrich the gravy if needful with rice, flour, and mushroom ketchup, or Harvey's sauce, or with a large teaspoonful of flour, mixed with a slice of butter, a little good store-sauce and a glass of sherry or Madeira. Fried forcemeat balls may be added at pleasure. With an additional quantity of water, or of broth (made with the bones of the joint), a pint and a half of young green peas stewed with the veal, for an hour, will give an agreeable variety of this dish.

VEAL, LOIN, MINCED.—Having roasted a fine loin of veal, take it up, and carefully remove the skin from the back part of it without breaking; cut out all the lean meat, but mind and leave the end whole, to hold the following mincemeat:—Mince all the meat very fine, with the kidney part, put it into a little veal gravy, enough to moisten it, with the gravy that comes from the loin; put in a little pepper and salt, some lemon-peel sliced fine, the yolk of three eggs, a spoonful of ketchup, and thicken it with a little butter rolled in flour; give it a shake or two over the fire, and put it into the loin, then pull the skin over it. If the skin should not cover it, make it brown with a hot iron, or put it into an oven for a quarter of an hour. Send it up hot, and garnish with lemon.

VEAL, LOIN, STEWED.—Take part of a loin of veal, the chump end will do, put it into a large, thick, well-tinned, iron saucepan, or into a stewpan, with about a couple of ounces of butter, and shake it over a moderate fire until it begins to brown; flour the veal well all over, lay it into the saucepan, and when it is of a fine, equal, light brown, pour gradually in veal broth gravy, or boiling water, to nearly half its depth; add a little sauce, one or two sliced carrots, a small onion, or more when the flavour is much liked, and a bunch of parsley; stew the veal very softly for an hour or rather more, then turn it, and let it stew for nearly or quite another hour, or longer, should it not be perfectly tender. Dish the joint, skim all the fat from the gravy, and strain it over the meat, or keep the joint hot while it is rapidly reduced to a richer consistency.

VEAL, LOIN, TO ROAST.—Skewer down the flap, place the joint at a moderate distance from a good fire, keep it constantly basted, and be especially careful not to allow the kidney-fat to burn; to prevent this, and to ensure the good appearance of the joint, a buttered paper is often fastened round the loin, and removed about half an hour before it is taken from the fire. Egg sauce and brown gravy may be served with roast loin or breast of veal. Separate the skin from the flank with a sharp knife, quite from the end to the place where the forcemeat is to be put, and then skewer the whole very securely; when the veal is not papered, dredge it well with flour soon after it is laid down to the fire; two hours to two and a half hours.

VEAL, MINCED.—Cut the veal very fine, but do not chop it, take a little white gravy or water, but gravy is better, a little milk, a

bit of butter rolled in flour, and grated lemon-peel, let these boil till like a fine thick cream, flour the veal, shake a little salt and some white pepper over it; put it into the saucepan to the other ingredients, and let it be quite hot; it must not boil after the veal is in, or it will be hard before it is taken up. If it is agreeable put sippets under it.

VEAL, MINCERON.—Chop very fine some cold dressed veal and ham or bacon, mix it with a slice of crumb of bread soaked in milk and squeezed dry, two onions chopped and browned, a little salt, pepper, and a little cream. Put all these ingredients into a stewpan until they are hot, and are well mixed together; then add one or two eggs according to the quality, butter a mould, put in the whole and bake it in an oven until it is brown; turn it out of the mould, and serve with fresh gravy.

VEAL, NECK, BRAISED.—Cut off the ends of the long bones, and saw off the chine-bones, raise the skin of the fillet, lay it very close, and tie it up neatly. Put the scrag end, a little lean bacon or ham, an onion, two carrots, two heads of celery, and about a glass of Madeira wine into a stewpan. Lay on them the neck, add a little water, and stew it two hours, or till it is tender, but not too much. Strain off the liquor, mix a little flour and butter in a stewpan till brown, stir some of the liquor in, and boil it up, skim it nicely, and squeeze orange or lemon-juice into it, and serve with the meat. The bacon should be browned with a salamander and glazed. It may also be served with spinach or sorrel.

VEAL, NECK, STEWED.—Take the best end of the neck, put it into a stewpan with some boiling water, some salt, whole pepper, and cloves tied in a bit of muslin, an onion, a piece of lemon-peel, stew this till tender; take out spice and peel, put in a little milk and flour mixed, some celery ready boiled and cut into lengths, boil it up, then serve.

VEAL OLIVES.—Cut them thin from the fillet (if it is large, one slice will make three), rub over them some yolk of egg, strew on them some bread crumbs mixed with parsley, and parsley chopped, lemon-peel grated, pepper, salt, also nutmeg; lay on every piece a thin slice of bacon, not too fat, roll them up tight, skewer them with small skewers, rub the outside with egg, roll them in bread crumbs, and lay them in a Dutch oven; let them do without burning; they take a good deal of time, as they are thick. Pour the following sauce on the dish:—Take a pint of good gravy, thicken it with flour, add ketchup, cayenne, pickled mushroom, boil this up a few minutes. Force-meat balls may be added.

VEAL PATTIES.—Chop about six ounces of ready dressed lean veal, and three ounces of ham very small, put it into a stewpan with an ounce of butter rolled in flour, half a gill of cream, half a gill of veal stock, a little grated nutmeg, and lemon-peel, some cayenne pepper and salt, a spoonful of essence of ham, and lemon-juice, and stir it over the fire some time, taking care it does not burn.

VEAL PIE.—Take some of the middle or scrag of a small neck; season it with pepper and salt, and either put to it or not a few pieces of lean bacon or ham. If it is wanted of a high relish, add mace, cayenne, and nutmeg to the salt and pepper, and also forcemeat and egg balls, and if you choose, add truffles, morels, mushrooms, sweet-bread cut into small bits, and cock's combs blanched; if liked, have a rich gravy to pour in after baking; it will be very good without any of the latter additions.

VEAL PILLAU.—Half-roast a breast or neck of veal, cut it into chops, and season it with pepper, salt, and nutmeg. Put a pound of rice to a quart of stock, some mace, and a little salt. Stew it very gently till thick, but butter the bottom of the pan you do it in. Beat up the yolks of six eggs, and stir them in. Take a small deep dish, butter it, and lay some of the rice at the bottom. Lay the veal in a heap, and cover it with rice. Rub it over with the yolks of eggs, and bake it an hour and a half. Open the top and pour in a pint of rich gravy. Serve it hot to table, and garnish with a Seville orange cut in quarters.

VEAL POTAGE.—Take of a knuckle of veal, all the meat that can be made into cutlets, &c., and set the remainder on to stew four or five hours at least, with an onion, a bunch of herbs, a blade of mace, some whole pepper, and five pints of water; cover it close. Strain it, and set it by till next day, take the fat and sediment from the jelly, and simmer it with either turnips, celery, sea kale, and Jerusalem artichokes, or some of each, cut into small dice, till tender, seasoning it with salt and pepper, and butter the size of a walnut. Before serving, rub half a spoonful of flour with half a pint of good cream; boil it a few minutes. Let a small roll simmer in the soup, to be served with it. The potage may be thickened with rice or pearl-barley, or the veal may be minced, and served up in the tureen.

VEAL POTTED.—Take a part of a knuckle or fillet of veal, that has been stewed, or baked for the purpose of potting; beat it to a paste, with butter, salt, white pepper, and mace, pounded; press it down in pots, and pour over it clarified butter.

VEAL RAGOUT.—Either a neck, loin, or fillet of veal, will furnish this excellent ragout with very little expense or trouble. Cut the veal into handsome cutlets; put a piece of butter, or clean dripping, into a frying-pan as soon as it is hot; flour and fry the veal of a light brown, take it out, and, if you have no gravy ready, put a pint of boiling water into the frying-pan, give it a boil up for a minute, and strain it in a basin while you make the thickening, in the following manner:—Put an ounce of butter into a stewpan; as soon as it melts, mix it with as much flour as will dry it up; stir it over the fire for a few minutes, and gradually add to it the gravy you made in the frying-pan; let them simmer together for ten minutes; season it with pepper, salt, a little mace, and a wineglassful of mushroom

ketchup or wine; strain it through a tamis to the meat, and stew very gently till the meat is thoroughly warmed. If you have any ready boiled bacon, cut it in slices, and put it to warm with the meat.

VEAL RISSOLES.—Mince and pound veal extremely fine; grate into it some remains of cooked ham. Mix these well together with white sauce flavoured with mushrooms; form this mixture into balls, and enclose each as pastry. Fry them in butter of a nice brown. The same mince may be fried in balls without pastry, being first cemented together with eggs and bread crumbs.

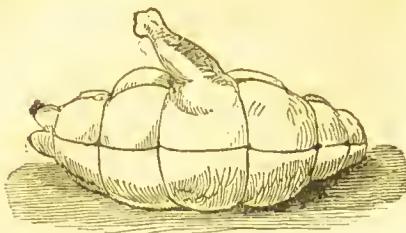
VEAL ROLLED.—Put the breast into a stewpan, with just water enough to cover it, an onion, a stick of celery, and a bundle of sweet herbs; let it stew very gently, adding more water as it stews, until it is tender: then take out the bones, and remove the skin; return the bones into the liquor, which will be a fine jelly, and serve as the sauce for several dishes. Cover the veal with a fine forcemeat, season it well, add egg-balls, and roll it up, securing it with tape. Put it into a stewpan with the fat bacon or a lump of butter, and a teacupful of the liquor it was stewed in; shake the stewpan about until the fat is melted, and turn the veal in it, that it may be all equally done, adding an onion and another bunch of herbs; let it braise one and a half, or two hours, then strain the gravy, and thicken it; garnish with forcemeat-balls, egg-balls, and fried paste cut in shapes. Peeled mushrooms may be given by way of variety.

VEAL ROLLS.—These are cut from any cold joint, or prepared in the same manner from the raw meat. Cut thin slices, and spread on them a fine seasoning of a few crumbs of bread, a little chopped or scraped bacon, parsley, and shallot, some fresh mushrooms stewed and minced, pepper, salt, and a small piece of pounded mace. This stuffing may either fill the roll like a sausage, or be rolled with the meat. In either case, tie it up very tight, and stew very slowly in a gravy and a glass of sherry. Serve it when tender, after skimming it nicely.

VEAL SCALLOPS.—Mince the meat extremely small, and set it over the fire with a scrape of nutmeg, a little pepper and salt, and a little cream, for a few minutes; then put it into the scallop shells and fill them with crumbs of bread, over which put some bits of butter, and brown them before the fire. Either veal or chicken looks and eats well prepared in this way, and lightly covered with crumbs of bread fried; or these may be put on in little heaps.

VEAL SHOULDER BONED.—Lay the joint flat upon a table or dresser, with the skin downwards; with a very sharp knife cut off the flesh from the inner side nearly down to the blade-bone, of which detach the edges first; then work the knife under it, keeping it always close to the bone, and

using all possible precautions not to pierce the outer skin. When it is in every place



separated from the flesh, loosen it from the socket with the point of the knife, and remove it; or, without dividing the two bones, cut round the joint until it is freed entirely from the meat; and proceed to divide the second bone. That of the knuckle is frequently left in, but for some dishes, it is necessary to take it out; in doing this, be careful not to tear the skin. A most excellent grill may be made by leaving sufficient meat for it upon the bones of a shoulder of mutton. When they are removed from the joint, it will be found very superior to the boiled blade-bone of a roast shoulder, which is so much liked by many people.

VEAL SOUP.—A knuckle of veal of six pounds in weight, will make a large tureen of excellent soup, and is thus easily prepared; cut half a pound of bacon into slices, about half an inch thick, lay it at the bottom of a soup-kettle, or deep stewpan, and on this place the knuckle of veal, having first chopped the bone in two or three places; furnish it with two carrots, two turnips, a head of celery, two large onions, with two or three cloves stuck in one of them, a dozen corns of black, and the same of Jamaica pepper, and a good bundle of lemon thyme, winter savory and parsley. Just cover the meat with cold water, and set it over a quick fire till it boils; having skimmed it well, remove the soup kettle to the side of the fire; let it stew very gently till it is quite tender, about four hours; then take out the bacon and veal, strain the soup, and set it by in a cool place till you want it, when you must take off the fat from the surface of the liquor, and decant it (keeping back the settings at the bottom) into a clean pan. If the soup is preferred thick, put three tablespoonfuls of the fat you have taken off the soup into a small stewpan, and mix it with four tablespoonfuls of flour; pour a tablespoonful of soup to it, and mix it with the rest by degrees, and boil it up till it is smooth.

VEAL STEWED.—Cut or chop two pounds of fresh veal into ten or twelve pieces; put these into a saucepan, with one teaspoonful and a half of salt, one teaspoonful of sugar, half a teaspoonful of pepper, two middle-sized onions sliced, and half a pint of water. Set on the fire for ten minutes, until forming a thick gravy. Add a good tablespoonful of flour; stir on the

flour a few minutes; add a quart and a half of water; let the whole simmer until the meat is tender. Veal will take from one hour to one hour and a half. Onions, sugar, and pepper, if not to be had, must be omitted. It will, even then, make a good dish. Half a pound of sliced potatoes, or two ounces of preserved potatoes, and various vegetables may be added; also a small dumpling.

VEAL STOCK.—Take all the veal bones you may have, together with chicken, fowls, turkey, or any white meat, and put them in a stockpot; let them boil for ten or twelve hours; crusts of dry bread and egg-shells, the same as directed for the stockpot, with the exception that it must be all white meat. When boiled the time above mentioned, strain it off, and let it stand until it is cold; then take the fat off the top, turn it into another dish, and scrape the sediment off. If done as directed, you will find it a perfectly clear jelly. This may be used as the groundwork of all kinds of sauces for veal.

VEAL STUFFING.—Three or four sprigs of parsley, two ounces of beef suet, and a small piece of lemon-peel, chopped fine, two teaspoonfuls of dried marjoram, one teaspoonful of common thyme, half a teaspoonful of lemon thyme, a teacupful of fine bread crumbs, half a teaspoonful of salt, a quarter of a teaspoonful of black pepper, a sprinkle of cayenne, and a grate of nutmeg. Mix with a well beaten-up egg.

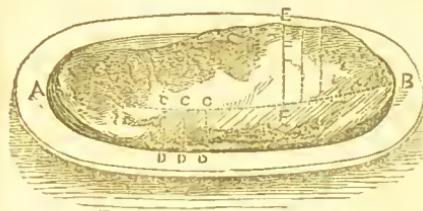
VEAL SYDNEY.—Pour, boiling, on an ounce and a half of fine bread crumbs, nearly half a pint of good veal stock or gravy, and let them stand till cool; mix with them two ounces of beef suet, shred very small; half a pound of cold roast veal, carefully trimmed from the brown edges, skin, and fat, and finely minced; the grated rind of half a lemon, nearly a teaspoonful of salt, a little cayenne, the third of a teaspoonful of mace or nutmeg, and four well-beaten eggs. Whisk up the whole well together, put it into a buttered dish, and bake it from three-quarters of an hour to an hour. Cream may be used, instead of gravy, when more convenient; but this last will give the better flavour. A little clarified butter, put into the dish before the other ingredients are poured in, will be an improvement.

 Bread crumbs, 1½ oz.; gravy or cream, ½ pint; beef suet, 20z.; cold veal, 1lb.; rind of half a lemon; salt, small teaspoonful; a third as much mace and nutmeg; little cayenne; eggs, 4 large or 5 small.

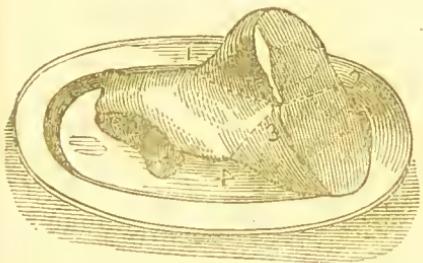
VEAL TEA.—Cut half a pound of fresh veal into slices, lay it in a dish, and pour over it a pint of boiling water; cover the dish, and let it stand half an hour by the fire, then just boil it up, pour it off clear, and salt it a very little.

VEAL, TO CARVE.—*The fillet:*—There is no difference between the mode of carving this and a round of beef, but the brown outside slice of the veal is much liked by many persons, and a portion of it should be served to them when the taste is known.

The forcemeat must be reached by cutting deeply into the flap, and a slice of it served with each helping. *The loin:*—This may be carved at choice, quite across, through the thick part of the flesh, or in slices taken in the direction of the bones. A slice of the kidney, and of the fat which surrounds it, should accompany the veal. *The breast:*—



Divide the joint into two parts by an incision in the direction A B; and then divide the brisket or gristly part, into convenient pieces, as C D, and the ribs also, as E F. The sweetbread, may be divided into portions, or assisted whole. *The knuckle:*—



Carve it in the direction 1 2. The most delicate fat lies about 4, and if cut in the line 3 4, the two bones, between which the marrowy fat lies, will be divided.

VEAL TO CHOOSE.—The flesh of a bull-calf is firmer than that of a cow, but it is seldom so white; the fillet of a cow-calf is generally preferred, on account of the udder. If the head is fresh, the eyes are plump, but if stale, they are sunk and wrinkled. If a shoulder is stale, the vein is not of a bright red; if there are any green or yellow spots in it, it is very bad. The breast and neck, to be good, should be white and dry: if they are clammy, and look green or yellow at the upper end, they are stale. The loin is apt to taint under the kidney; if it is stale, it will be soft and slimy. A leg should be firm and white; if it is limp and flabby, with green or yellow spots, it is not good.

VEAL, WITH RICE.—Take a pound of rice, put it to a quart of veal broth, some mace, and a little salt, stew it over a very slow fire till it is thick, put at the bottom of the stewpan, the yolks of six eggs beat up, and stir it into it, then take a dish, butter it, lay some of the rice at the bottom, and put upon it a neck or breast of veal, half-roast it, cut into five or six pieces, lay the

veal close together, in the middle, and cover it over with rice, wash the rice over with the yolk of eggs, and bake it an hour and a half, then open the top and pour into it some good thick gravy, squeeze in the juice of an orange.

VEAL, WITH WHITE SAUCE.—Boil milk or cream with a thickening of flour and butter, put into it thin slices of cold veal, and simmer it in the gravy till it is made hot without boiling. When nearly done, beat up the yolk of an egg, with a little anchovy and white sauce, pour it gently to the rest, stirring it all the time; simmer the whole together again, and serve it with sippets of bread and curled bacon alternately.

VEGETABLE MARROW AND CELERY PIE.—Cut three roots of celery into small pieces, with a proportionate quantity of vegetable marrow, and an onion, season with pepper and salt, add a dessert-spoonful of tapioca, steeped in a quarter of a pint of cold water, and an ounce of butter; put all together into a pie dish, cover with paste, and bake it in a moderately hot oven.

VEGETABLE MARROW, BAKED.—Take a middle-sized marrow, three eggs, a tablespoonful of bread crumbs, and a quarter of an ounce of parsley and leeks mixed. Half-boil the marrow; peel and cut it in small pieces, taking out the seeds and pulp; put it into a flat dish with some butter, melted, season with pepper and salt, and bake it for about twenty minutes in a moderately hot oven. Beat the eggs well, add the bread crumbs, and the parsley and leeks, pour them over the marrow; let it remain in the oven till nicely browned, and serve with brown sauce.

VEGETABLE MARROW, BOILED.—The smallest are considered the best, but when they are about five or six inches long, the fruit is more mature, better flavoured, and the fruit whiter. Put them into boiling water with a little salt; boil them gently till quite tender, and serve them, either whole or pared and halved, on a slice of bread toasted, with plain melted butter in a boat; or when cold they may be pared and sliced, then dipped in a batter made with an egg, a teacupful of water or milk beaten together, a little salt, and about a quarter of a pound of flour, or sufficient to make the batter thick enough to adhere to the slices, or they may be brushed over with egg, and covered with fine bread crumbs, and then fried. Arrange them neatly on a dish, and serve with melted butter.

VEGETABLE MARROW, CULTURE OF.—This is one of the most valuable varieties of this description of vegetable. It is useful for culinary purposes in every stage of its growth, peculiarly tender and sweet, and the plant is a prolific bearer. They are propagated by seed, which may be sown in a hot-bed of moderate strength, under a frame or hand-glasses, at the end of March, or early in April. In May, they may be sown in the open ground beneath a south fence, there to remain, or in a hot-bed if it is convenient to forward the plants for transplanting at its close, or early in June.

The plants are fit for transplanting when they have produced four rough leaves, or when of about a month's growth. They must be planted without any shelter on heaps of manure, the same as for the opening ground crop of cucumbers. Some may be inserted beneath poles, walls, or hedges to be trained regularly over them, on account of their ornamental appearance. They may be treated in every respect like the cucumber, only they do not require so much care; they want abundance of water in wet weather. When the runners have extended three feet, they may be pegged down, and covered with earth at a joint; this will cause the production of roots, and the longer continuance of the plant in vigour. The fruit for seed should be selected, and treated as directed for cucumbers.

VEGETABLE MARROW, FRIED.—Take one marrow, one egg, and two ounces of bread crumbs. Peel and cut the marrow in slices, three-quarters of an inch thick; let it drizzle for a quarter of an hour, and season it on both sides with pepper and salt, then brush each slice with egg; sift the bread crumbs over, and fry the slices in batter till they attain a light brown on both sides; bake in a tin in the oven till done, and serve in a strainer, with crisped parsley, and brown sauce.

VEGETABLE MARROW MARMA-LADE.—Peel the marrows, and grate them. To six pounds of fruit, put six pounds of loaf sugar, and the juice and grated rinds of two lemons; boil it for half an hour over a moderate fire, stir it frequently, and pour it into small moulds.

VEGETABLE MARROW, MASHED.—Peel and cut vegetable marrows in halves, scraping out the seeds, then boil them for about twenty minutes, with salt in the water, and when soft, drain them thoroughly in a sieve, wash them and add a little butter or cream; season with pepper and salt, stir them in a saucepan over the fire till quite hot; put them in a basin, and turn them into a dish.

VEGETABLE MARROW, PRESERVED.—Peel the marrows, and after scraping out the seeds and fibres, cut them in pieces. To each pound of fruit, allow one pound of loaf sugar, and the juice of a lemon. Set the whole over the fire, and after it begins to boil, let it continue boiling for half an hour, and then pour it into the preserving pots.

VEGETABLE MARROW, ROASTED.—Boil a large sized marrow for half an hour; cut it in two; take out the seeds; season with pepper and salt, and fill it with forcemeat, dredge it with flour; put two ounces of butter on the top; roast it in a quick oven, and serve with brown sauce.

VEGETABLE MARROW SOUP.—Pare a pound of vegetable marrows, and cut them into slices about a quarter of an inch thick, taking out all the seeds and pulp; wipe them dry and dredge them with flour, fry them in butter, till of a nice brown; stew the stems and parings of a quart of mushrooms, in a pint of water for an hour, adding a little salt; drain the water from

them and set the liquid over the fire in a pan, with two quarts of boiling water; put in the marrows, and a quarter of a pound of crumb of bread, and a quart of mushrooms chopped small; season with pepper and salt, and let the whole boil together for an hour and a half. If the soup be too thin, mix a teaspooonful of flour with a little butter, stir it well in, and after it has boiled for a few minutes, add a tablespoonful of vinegar.

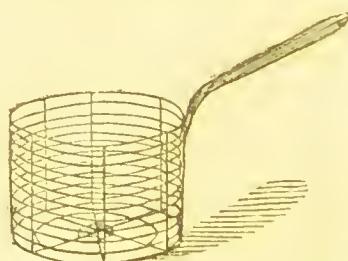
VEGETABLE MARROW, STEWED.—Pare off the outer skin; cut the gourd into slices and then into dice, taking out the seeds. Scrape a little fat bacon, which put into a stewpan with a small onion or two, and a little parsley chopped fine. Cover the stewpan close, and fry gently from five to ten minutes; then thicken with a spoonful of flour, and add a little veal broth, to make the sauce the consistency of rich cream. Season with pepper and salt, replace the cover, and stew gently until quite tender. A mushroom, chopped, may be added.

VEGETABLE PIE.—Seal and blanch some broad beans; cut carrots, turnips, artichoke bottoms, mushrooms, peas, onions, lettuce, parsley, celery, &c. Make the whole into a stew, with some good veal gravy. Bake a crust over a dish, with a little lining around the edge, and a cup inserted to prevent it sinking. When baked, lift the crust, and pour in the stew.

VEGETABLE PUDDING.—Take six ounces each of raw scraped carrot, finely mashed potatoes, currants, flour, and beef suet; mix well without any liquid if for boiling, but add an egg and a little milk if for baking.

VEGETABLE SOUP.—Pare and slice five or six cucumbers; and add to these the insides of as many lettuces, a sprig or two of young peas, and a little parsley. Put these with half a pound of fresh butter, into a saucepan, to stew in their own liquor, near a gentle fire, half an hour; then pour two quarts of boiling water to the vegetables, and stew them for two hours; rub down a little flour into a teacupful of water, boil it with the remainder of the ingredients for fifteen or twenty minutes, and serve it.

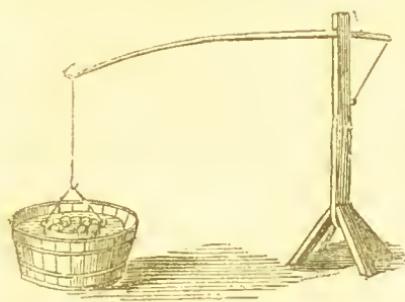
VEGETABLE STRAINER.—A culinary implement employed for straining off water and other liquids from solid matters; it



should be kept particularly clean, and one article should not be placed in it before all traces of the preceding one have been effaced.

VEGETABLE VINEGAR.—To eight gallons of clear rain-water add three quarts of molasses; turn the mixture into a clean tight cask, shake it well two or three times, and add three spoonfuls of good yeast, or two yeast cakes; place the cask in a warm place, and in ten or fifteen days, add a sheet of common wrapping-paper, smeared with molasses, torn into narrow strips, and good vinegar will be obtained. The paper is necessary to form the "mother," or life of the vinegar.

VEGETABLE WASHER.—An implement similar to that seen in the engraving is very useful for washing vegetables. This



is, in fact, a ready mode of sousing them, and is the only way to get the insects, &c., out of them. The vegetables are placed in the inner receptacle, which is moved up and down several times, and the action of the water thus produced, effectually cleanses the vegetables.

VEGETABLES, PREPARATION AND DRESSING OF.—In choosing vegetables the medium-sized sort is to be preferred to the largest, or the smallest; they are more tender, juicy, and full of flavour just before they are full grown; on the other hand, unripe vegetables are as insipid and unwholesome as unripe fruits. Roots, greens, salads, and the various productions of the garden, when fresh gathered, are plump and firm, and have a fragrance and freshness which no art can impart to them; though it will refresh them a little to put them into cold spring water for some time before they are dressed. To boil them in soft water will best preserve the colour of such as are green; but if only hard water can be obtained, a teaspoonful of carbonate of potash may be added to the water. Previous to dressing vegetables, they should be thoroughly washed and cleansed from dust, dirt, and insects. Pick off all the outside leaves, trim them nicely, and if they are not quite fresh-gathered, and have become flaccid, it is absolutely necessary to restore their crispness before cooking them, or they will be tough and ill-flavoured; lay them in a pan of clean water, with a handful of salt in it, for an hour before they are dressed. Most vegetables being more or less succulent, the full proportion of fluids is necessary for their retaining that state of crispness and plumpness which they have when growing. On being cut or gathered,

the exhalation from the surface of vegetables continues, while from the open vessels of the ent surface there is often great exudation or evaporation, and thus their natural moisture is diminished; the tender leaves become flaccid, and the thicker masses or roots lose their plumpness. This is not only less pleasant to the eye, but is a great injury to the nutritious powers of the vegetable; for in this flaccid and shrivelled state, its fibres are less easily divided in mastication; and the water which exists in vegetable substances, in the form of their respective natural juices, is directly nutritious. The first care in the preservation of succulent vegetables, therefore, is to prevent them from losing their natural moisture. They should always be boiled in a saucepan by themselves, and have plenty of water; if meat is boiled with them in the same pot, the appearance and taste of each will be spoiled. To have vegetables delicately clean, put on the saucepan, make it boil, put a little salt in, and skim it perfectly clean before the vegetables are put in, which should not be till the water boils briskly; the quicker they boil, the greener they will be. Vegetables should be taken up immediately they are done, if they remain only a few minutes over the fire afterwards, their appearance and flavour are both deteriorated. The practice of putting soda into the water in which vegetables are boiled is not a wholesome one, nor is it necessary, when the foregoing directions are attended to.

VEGETARIAN COOKERY.—As there are many persons who wholly abstain from animal food, and as the dressing of vegetables is worthy of universal attention, the following recipes, by which ordinary vegetables may be converted into savoury dishes, are given under one head, in order to facilitate immediate reference.

Artichoke Ragout.—Soak artichoke bottoms in warm water for two or three hours, changing the water; put them into a stewpan with some good gravy, a tablespoonful of mushroom ketchup, a little salt and cayenne pepper. Boil, thicken with flour, place them in a dish, and pour the gravy sauce over them; then serve hot.

Asparagus Omelet.—Take fifty heads of asparagus and six eggs. Boil the asparagus in the usual way; cut the green ends in small pieces, as far as they are tender; mix them with the eggs, well beaten; make some clarified butter hot in a small frying-pan, and put in the omelet; sprinkle it over with a little pepper and salt, and fry it of a nice brown. It should be rather thick, and ought to be served immediately, with butter, sauce, and vinegar.

Bean Soup.—Take a quart of full-grown green beans, a large handful of spinach, an ounce of parsley, and two ounces of butter. Boil the beans; skin and bruise them in a bowl till quite smooth; put them in a pan with two quarts of vegetable broth; add the butter, with a little flour dredged in it, pepper, and salt; stir it over the fire till it boils; then put in the spinach and parsley (previously boiled and rubbed through a sieve), to make the soup a proper colour.

Beet-Root, Boiled.—Wash and brush the roots, being careful to avoid breaking off the fibres, that the juice may not escape and spoil the appearance and flavour; put them into a pan of boiling water, adding salt and a small piece of soda; let them boil for one or two hours, according to size; put them into cold water and rub off the skin with the hand; cut them in slices; lay them neatly on a dish, and serve either with vinegar or mustard sauce.

Beet-Root, Fried.—Wash the roots perfectly clean; bake them whole till tender; put them into cold water; rub off the skin with the hand; cut into thin round slices; season with pepper and salt; fry them in butter; place on a flat dish, and garnish with parsley.

Cabbage, Red, Stewed.—Take a red cabbage, an onion, an ounce of butter, and three tablespoonfuls of vinegar. Remove the outside leaves of the cabbage, and wash the cabbage well; cut it in thin slices, and put it in a pan of boiling water; add a little salt; when about half boiled, drain the water entirely away, leaving the cabbage as dry as possible; then put it into a pan with a quarter of a pint of boiling water, together with the onion cut in thin slices, and the butter; season with pepper and salt; let it stew gently until the cabbage is perfectly soft, then add vinegar.

Caleannon.—Boil potatoes and greens, separately; mash the potatoes; squeeze them dry, and then chop them into small pieces and mix them with potatoes, adding a little butter, pepper, and salt; put them into a well-buttered mould, and let it stand in a hot oven for five or six hours, turn it out, and serve in a vegetable dish.

Cardoons Fried.—Cut the cardoons about ten inches long, string, and tie them in bundles like asparagus, and cut them into dice; boil the same as peas; add some butter, pepper, and salt, and serve hot.

Cardoons with Cheese.—String the cardoons, then cut them an inch long, place them in a saucepan, and stew in some port wine, enough to cover them, until tender; season with pepper and salt, and thicken with floured butter; pour into a dish, add the juice of an orange, and grate some Cheshire cheese over the whole; brown with a salamander, and serve hot.

Carrot Fritters.—Take a quarter of a pound of carrot, two ounces of bread crumbs, two tablespoonfuls of cream, and two eggs. Boil and mash the carrot till perfectly smooth; add the bread crumbs and cream; season with pepper and salt; add the eggs, well beaten, immediately before frying; fry in fritters, and serve with brown sauce.

Carrot Soup.—Take eight good-sized carrots, two roots of celery, one large turnip, one large onion, six ounces of crumb of bread, two ounces of butter, and half a pint of cream. Set over the fire, three quarts of water, with a piece of soda the size of a small nut; when it boils, put in the vegetables, previously sliced, the bread, salt, a little cayenne pepper and mace; boil the whole till the vegetables are perfectly soft; rub it through a sieve; return it into the

pan; and, whilst boiling, stir in the cream, not allowing it to boil afterwards. The soup should be of the consistency of good cream. The green part of the celery should not be used.

Carrots Stewed.—Take a pound and a half of carrots, an ounce of butter, a quarter of an ounce of parsley, a teaspoonful of flour, and four tablespoonfuls of cream. About half boil the carrots, then scrape and slice them; put them into a pan with half a teacupful of vegetable broth or water; season with salt and pepper; let the whole simmer till quite tender, without being broken; add the chopped parsley, and stir in the flour and the butter, previously mixed; simmer them ten minutes longer; add the cream, and serve immediately.

Cauliflower Fried.—Boil a cauliflower quickly for a few minutes, then boil it gently until nearly tender; drain it well; cut it in slices; dip them in butter; fry them a light brown colour, and serve with brown sauce.

Cauliflower, with White Sauce.—Boil a cauliflower in milk and water till nearly tender, separate it into small pieces, and put it into a saucepan with white sauce, and either a few small mushrooms or very small onions, previously boiled, and serve with toasted snippets put round the dish.

Celery Fried.—Take three heads of celery, cut off the green tops, remove the outside stalks, wash thoroughly, and pare the roots clean; then have ready a gill of white wine, the yolks of two eggs beaten fine, and a little salt and nutmeg; mix all well together with flour, so as to form a good batter; dip each head into the batter, and fry a nice light brown in lard. When done, lay in the dish, pour melted butter over them, and serve hot.

Celery, with Cream.—Take the white part of celery, wash it clean, and cut in pieces three inches long, boil it tender, and strain it off; then beat up the yolks of four eggs, strain them into half a pint of cream; add a little salt and nutmeg. Put all into a pan, set it over a stove until it boils, and is of a proper thickness; serve with toasted bread underneath.

Cucumber Stewed.—Take a pound of cucumbers, half a pound of onions, an ounce of butter, and a teaspoonful of flour. After peeling the cucumbers and onions, cut them in slices about the eighth of an inch thick, and fry them in butter till well browned; put them into a saucepan with a quarter of a pint of hot water or vegetable broth; season with pepper and salt; let them stew till quite soft, add the flour and butter, mixed well together, and boil gently for five minutes.

Endive Stewed.—Boil endive in four different salt waters, to extract the bitter taste, and when tender, throw it into cold water, squeeze it well, and chop fine; then put it into a stewpan, with a piece of butter, and a few young onions chopped fine; let it dry; dredge with a dessertspoonful of flour, add some pepper and salt, a little gravy, two teaspoonfuls of sifted sugar, and stew the whole gently for a quarter of an hour.

French Bean Omelet.—Take four eggs, two

tablespoonfuls of grated Parmesan cheese, two tablespoonfuls of French beans, two ounces of butter, two saltspoonfuls of salt, and half a saltspoonful of pepper. Beat the eggs well, add the cheese, pepper, and salt; mix all together, and put in the beans, cut small and well boiled. Melt the butter in a pan, and fry the omelet in the usual way.

French Beans, with Cream.—String the beans, cut them into slips, and boil them in plenty of water with salt in it; when done, drain them. Put them into a stewpan with two ounces of fresh butter, the yolks of three eggs, beaten up in a gill of cream, and set over a slow fire. When hot, add a tablespoonful of vinegar and the beans; simmer for five minutes, stir with a wooden spoon, to prevent burning or curdling, and serve hot.

Haricot Bean Omelet.—Take half a pint of haricot beans, two tablespoonfuls of bread crumbs, four eggs, half an ounce of parsley, half a teacupful of milk, and a tablespoonful of olive oil. Steep the beans several hours in cold water; boil them in fresh water till quite soft; mash them with milk, and rub them through a fine sieve; add the bread crumbs, the parsley chopped fine, the eggs, well beaten, the olive oil, salt, and pepper; pour the omelet into a buttered dish, bake it for about an hour in a moderately hot oven, and serve with brown sauce.

Haricot Beans Steamed.—Take a pint of beans, three ounces of butter, the juice of a lemon, and an ounce of parsley. Steep the beans in cold soft water for two hours; drain them, and set them over the fire in two quarts of cold soft water, adding a saltspoonful of salt, and an ounce of butter; when the mixture boils, simmer it slowly for two hours or more, put it into a stewpan, with a little pepper, salt, chopped parsley, two ounces of butter, and the lemon-juice; set the whole over the fire for a few minutes, and stir them well till done.

Herb Pie.—Pick two handfuls of parsley from the stems, half the quantity of spinach, two lettuces, some mustard and cress, a few leaves of borage, and a little mint. Wash and boil them a little, then drain them, press out the water, and chop them small; mix a batter of flour, two eggs well beaten, half a pint of milk, and a pint of cream, and pour it upon the herbs. Cover over with a good crust, and bake.

Herb Soup.—Take a quarter of a peck of spinach, an ounce of parsley, half a pound of bread crumbs, a quarter of a pound of butter, and a few green onions. Parboil the herbs, drain them, and cut them into small pieces; stew them in the butter for half an hour, and dredge in a little flour. Put the bread crumbs into a pan with two quarts of water; boil till smooth; add the herbs; season with pepper and salt, and boil for ten minutes.

Lentil Soup.—Take one quart of lentils, two pounds and a half of parsnips, two pounds of celery, two ounces of shallots or leeks, an ounce of chopped parsley, and two ounces of butter. Wash and pick the lentils; steep them for twenty-four hours

in soft water; set them over the fire in four quarts of spring water; add the vegetables and some salt; boil till quite soft; rub through a fine cullender or coarse sieve, adding boiling water as required; return it to the pan, season with pepper and salt, stir in the butter, and boil for a few minutes.

Lentils Steamed.—Take a quart of lentils, three ounces of butter, one onion, a tablespoonful of chopped shallots, and a small bunch of parsley. Wash and steep the lentils an hour or two in cold soft water; set them on the fire in two quarts of soft cold water, with an ounce of butter, shallots, the onion sliced, the parsley chopped, and a little salt; simmer the whole over the fire for about two hours; drain in a sieve; put the lentils into a stewpan, with two ounces of butter, mixed with a little flour; stir it well over the fire, boil gently for ten minutes, and serve in a flat dish, with a border of mashed potatoes.

Mushroom Pudding.—Take a pint of mushrooms, half a pound of bread crumbs, and two ounces of butter. Rub the butter in the bread crumbs, adding pepper and salt, and as much water as will just moisten the bread; add the mushrooms cut in pieces; line a basin with paste; put in the mixture; cover with paste; tie a cloth over, and boil for an hour and a half.

Mushrooms Baked in Cups.—Take a pint of mushrooms, six eggs, and a quarter of an ounce of chopped parsley. Boil the stalks and parings of the mushrooms, strain the water from them, and put half a pint of it into a pan with the mushrooms, well cleaned and chopped; add the parsley; season with pepper and salt, and let them boil gently over a slow fire or stove about half an hour; add the eggs, well beaten, and mix all well together; butter some small cups, put in the mixture, and bake quickly; turn them out on a dish, and serve with mushrooms, stewed white, or white sauce.

Mushrooms Broiled.—Peel some good-sized mushrooms, and cut off the stalks; put them in a tin with a small piece of butter on each; season with pepper and salt, and let them remain in the oven till rather brown on both sides; take out the mushrooms, pour out a little of the water, in which the stalks and parings have been boiled, into the tin, and, when boiling, pour it on the dish.

Mushrooms Fried.—Pare the mushrooms, which should be large ones, and put them in water, the brown side downwards; drain them carefully on a sieve or cullender; lay between them two cloths till nearly dry; sprinkle them with salt and pepper, and fry them of a light brown.

Mushrooms Steamed.—Wipe dry some large button mushrooms; boil them quickly in a little water, then let them stew gently for twenty minutes, adding a piece of butter, mixed with a dessertspoonful of flour, a little pounded mace, cayenne pepper, and salt; boil them, frequently shaking the pan round during the time, and, when done, add a little good cream.

Onion Pudding.—Take half a pound of

onions, half a pound of bread crumbs, a teaspoonful of dried sage, half a teaspoonful of thyme, and two ounces of butter. Peel and cut the onions in two, boil them about ten minutes, drain away the water and chop them, but not very small, put them to the bread with the herbs, and the butter melted, season with pepper and salt, and boil it for an hour and a quarter in a buttered basin.

Onion and Sage Fritters.—Take twelve ounces of onions, twelve ounces of bread crumbs, two teaspoonfuls of chopped sage, previously boiled a little, one teaspoonful of chopped parsley, three eggs, and two tablespoonfuls of cream. Chop the onions, fry them with the sage till nicely brown, mix eight ounces of them with the bread crumbs, add the parsley, season with pepper and salt, beat the eggs, adding the cream, mix all together, and fry in fritters over a clear fire; place the remaining four ounces of fried onion on the dish round the fritters, and serve with brown sauce and apple sauce.

Onions and Sage on Toast.—Peel and cut some onions in two, boil them for five minutes, drain away the water, chop them and add sage, previously minced small, season with pepper and salt, and fry them in butter till tender, but not brown; lay the mixture on buttered toast, pour a little brown sauce over, and serve with apple sauce.

Onions, Fried.—Peel some large onions; cut them in slices, season with pepper and salt, and fry them in butter till nicely browned.

Onions, Stewed.—Peel and slice some onions, put them into a dish with some butter, previously browned; set them in a moderately hot oven, and when they are nicely browned, pour over them some rather thin melted butter, season with pepper and salt, and let them stew for a quarter of an hour longer. If the onions are strong, they should be boiled about five or six minutes before they are stewed.

Onions, to Ragout.—Peel a pint of young onions, then peel four large ones, and cut them very small; put some good dripping or butter into a stewpan, and when melted, add the onions, and fry till of a light brown; then thicken with flour, and give them a shake until thick. Add a quarter of a pint of gravy, a little pepper and salt, and a teaspoonful of mustard; stir all together, and when tolerably thick, pour into the dish, and garnish with fried bread crumbs.

Parsnips, Baked.—Scrape or pare some parsnips, and, if large, cut them into quarters, lay them in a flat baking-dish, add a little water, dredge with flour and salt, and bake till soft, and slightly browned. A little butter may be put on the top, just before serving.

Parsnips, Mashed.—Boil the parsnips in plenty of water, adding a little salt; when soft, take them out, scrape and wash them, put them into a saucepan with a little cream, stir them over the fire till thickened, add an ounce of butter, and a little suet; when the butter is melted, put the mixture into a hot basin, and turn it out into a vegetable dish.

Dried Peas, Stewed.—Take an ounce of peas, and an ounce of butter; pick and wash the peas; steep them in water for twelve hours, put them into a pan with just sufficient water to cover them; add the butter and a teaspoonful of salt; let them boil, afterwards stew the peas gently till they are quite soft, and add a further seasoning of pepper and salt, if required.

Green Peas with Cheese.—Take a pint and a half of green peas, a quarter of a pint of new milk, two tablespoonfuls of cream, an ounce of butter, and an ounce and a half of cheese. Put the milk, cream, and butter, with the cheese, grated, in a saucepan on the fire; add a little cayenne pepper; stir the whole till the butter and cheese are dissolved, put in the peas; when well boiled and drained, stir it on the fire for two minutes, and serve quite hot.

Potatoes Fried with Onions.—Take a pound and a half of cold boiled potatoes; three onions, one ounce of chopped parsley, and three ounces of butter. Melt the butter in a frying-pan, put in the onions, sliced; fry them to a light brown; add the potatoes, cut into thin slices; fry them till of a nice yellow colour, turning them occasionally, and then add the parsley, salt, and pepper.

Potatoes, Hashed.—Take four pounds of potatoes, a tablespoonful of fine oatmeal, two ounces of butter, a dessertspoonful of chopped parsley, and a quarter of an ounce of chopped leeks. Set a pint and a half of water on the fire, with the oatmeal, pepper, and salt; stir till it boils, then put in the potatoes, parsley, and leeks, and when nearly done, stir in the butter.

Potatoes, Stewed.—Cut the potatoes as for a pie; place them in a pan in layers, with a little chopped onion, and a seasoning of pepper and salt between each layer; put butter on the top, allowing about half an ounce to each pound of potatoes, and a quarter of a pint of water; cover the pan, and let them stew moderately for about thirty or thirty-five minutes.

Scorzonera, Fried.—Wash and scrape the scorzonera, taking off the tops; boil it till tender, then dip it in butter, and fry it; lay two or three of the roots together, and serve with brown sauce.

Spinach Omelet.—Take a quarter of a pound of spinach, a quarter of a pound of beet-root half an ounce of parsley, half an ounce of leeks and lemon-thyme, mixed, a large tablespoonful of flour, four spoonfuls of milk, four eggs, and two ounces of butter. Chop the herbs all together, season with pepper, salt, and nutmeg or mace; add the flour, milk, and the eggs, well beaten, and the butter melted; mix the whole well together, and bake twenty minutes in a quick oven.

Turnip Hash.—Take three-quarters of a pound of turnips, three-quarters of a pound of potatoes, two tablespoonfuls of flour, two ounces of butter, one large onion, and a tablespoonful of salt. Put three quarts of water into a well-tinned pan; set it over the fire; put in the turnips (cut into small square pieces), and the onion, cut

small; add the salt, and let it boil for an hour. Then put in the potatoes, also cut in pieces, and after boiling three-quarters of an hour longer, add the butter; rub the flour in a quarter of a pint of cold water till perfectly smooth; pour it into a pan, and let it boil slowly for a quarter of an hour longer, when the liquid part of the hash will be of the consistency of thin butter sauce; boil it for two hours, and keep it covered the whole time.

Vegetable and Rice Soup. — Take half a pound of turnips, half a pound of carrots, half a pound of parsnips, half a pound of onions, half a pound of potatoes, and two tablespoonfuls of rice. Slice the vegetables, put them into a pan with a quart of boiling water; add the rice, previously washed, a dessertspoonful of salt, and a small piece of soda. After boiling for an hour, add the potatoes sliced, and two quarts of boiling water; continue boiling till all are well done. If the soup is too thin, mix a tablespoonful of rice flour with a little milk; stir it well in, adding white pepper and more salt, if required; boil it for fifteen minutes, and add a quarter of a pint of cream.

Vegetable Broth. — Half-fill a pan, which will contain about four quarts, with turnips, carrots, onions, and other vegetables, cut in pieces; add seasoning, herbs, mushrooms, and salt; nearly fill the pan with water, and boil all together till the vegetables are tender; then strain it and use as required.

Vegetable Marrow, Baked with Onions and Sage. — Pare, and cut in two, a good-sized marrow; scrape out the seeds and fibres; rub the marrow inside and outside with a little salt; let it drain for an hour; fill up the halves with onions, previously boiled a little, and chopped with some sage; add a little butter, pepper, and salt; close them, and tie them together with a little twine; butter a dish, and bake in a moderately hot oven; if not nicely browned, dredge it with a little flour, brown it in a Dutch oven before the fire, and serve with brown sauce.

Vegetable Pie. — Take some carrots, turnips, onions, celery, and two ounces of butter. Cut the vegetables in pieces, put them in the pan with the butter, and very little water; season with pepper and salt, stew them over the fire, and when nearly tender, pour them into a pie dish; when cool, cover with paste and bake it.

Veil, Black, to Wash. — Mix bullock's gall with sufficient hot water to make it as warm as you can bear your hand in. Then pass the veil through it. It must be squeezed, and not rubbed. It will be well to perfume the gall with a little musk. Next rinse the veil through two cold waters, tinging the last with indigo. Then dry it. Have ready in a pan some stiffening, made by pouring boiling water on a very small piece of glue. Put the veil into it, squeeze it out, stretch it, and clap it. Afterwards pin it out to dry on a linen cloth, making it very straight and even, and taking care to open and pin the edge very nicely. When dry, iron it on the wrong side, having laid a linen cloth over the ironing-blanket. Any

article of black lace may be washed in this manner.

Veil, White Lace, to Wash. — Put the veil into a strong lather of white soap and very clear water, and let it simmer slowly for a quarter of an hour. Take it out and squeeze it well, but be sure not to rub it. Rinse it in two cold waters, with a drop or two of liquid blue in the last. Have ready some very clear and weak gum arabic water, or some thin starch, or rice-water. Pass the veil through it, and clear it by clapping. Then stretch it out even, and put it to dry on a linen cloth, making the edge as straight as possible, opening out all the scallops, and fastening each with pins. When dry, lay a piece of thin muslin smoothly over it, and iron it on the wrong side.

Veins, Varicose. — This is a term applied by surgeons to a permanently distended state of one, or a group of veins, attended with an accumulation of dark coloured blood, and a retarded circulation, causing the formation of knots beneath the skin, which becomes discoloured, livid, and the part remarkably sensitive and painful. Varicose veins may occur in any part, though they are most frequently found in the legs, and are in general the result of pressure on some of the larger veins above, obstructing the return of the blood to the heart. Of this description are the varicose veins in the legs of females before confinement; they also attend weak and relaxed constitutions, and frequently follow much fatigue and long standing. The chief danger to be apprehended in this disease of the veins, is the fear of their bursting, and the hazard resulting from the haemorrhage that ensues. Many remedies have been devised for this disease, but interference has generally proved more hurtful than beneficial. Foremost among the favoured remedies, was the excision of a small piece of the vein with ligatures, and next, the simple tying of the vein, as in aneurism; but the danger which attended this treatment, soon put a check on its employment. The best and safest measures to pursue, are to discover what causes the pressure, and at once remove it; if it proceeds from the bowels, a course of purgative medicine is to be employed, at the same time as much rest is to be enjoined as possible, by lying in a horizontal position, and whenever the erect posture is assumed, or any walking attempted, the limb is to be supported by a long bandage, commencing from the toes, and carried well up the thigh, first laying a compress of folded lint, enclosing a piece of lead, or a penny-piece, over the most protuberant portion of the vein. The bandage, when well put on, is a very excellent support, but the elastic lace-stockings, to those who can afford it, are unquestionably the best of external remedies, and should be worn as long as any danger from bursting is to be apprehended; this, with rest, and such medicine as the exciting cause may demand, is the only safe and rational treatment for varicose veins, which, when not proceeding from disease of the vessels, is always to be so cured.

VELVET, to IRON.—Having ripped the velvet apart, damp each piece separately, and holding it tightly in both hands, stretch it before the fire, the wrong side of the velvet being towards the fire. This will remove the creases, and give the surface of the material a fresh and new appearance. Velvet cannot be ironed on a table, for, when spread out on a hard substance, the iron will not go smoothly over the pile.

VELVET, to RAISE THE PILE OF.—Hold the reverse side of the velvet over a basin of water, and the pile of the velvet will be gradually raised.

VELVET, to REMOVE GREASE FROM.—Get some turpentine, and pour it over the place that is greasy, rub it till quite dry with a piece of clean flannel; if the grease be not quite removed, repeat the application, and when done, brush the place well, and hang up the garment in the open air, to rid it of the smell.

VENETIAN CAKE.—Take of sound Jordan almonds, blanched and well dried at the mouth of a cool oven, or in a sunny window, seven ounces, full weight, and one of bitter almonds with them; pound the whole to a perfect paste with a few drops of white of egg, or orange-flower water, then mix them thoroughly with one pound of flour, and eight ounces of butter (which should be cool and firm, or it will render the paste too soft), and break this down quite small; then add eight ounces of powdered sugar, on part of which the rind of a fine lemon has been rasped, previously to its being crushed to powder. Make these into a paste, with the yolks of four eggs, or rather less, should they be large, for if too moist, it will adhere to the board and roller. To make a Venetian cake of moderate size, roll the paste less than a quarter of an inch thick, and cut with the larger fluted cutter, six or seven portions of equal size, lay them on lightly floured or buttered tins, and bake them in a slow oven until they are firm and crisp and equally coloured of a pale brown. Should they seem to require it, lay them one on the other, while they are still warm, and place a baking tin with a slight weight upon them to render them quite level. When they are cold, spread upon each a different kind of choice preserve, and pile the whole evenly into the form of an entire cake. The top may be iced, and decorated with pistachio nuts, or grains of coloured sugar, or with a wreath of almond-paste leaves. To make the small Venetian cakes, roll the paste directed for the large one at the convenience of this receipt, into balls, flatten them with the hand, to about the third of an inch thick, brush them with beaten eggs, and cover them plentifully with white sugar-candy, crushed about half the size of a pea; bake them in a slow oven.

Almonds. 8ozs.; flour, 1lb.: butter, 8ozs.; sugar, $\frac{1}{2}$ lb.; lemon, rind of 1; yolks of eggs, 3 to 4; preserve as needed.

VENETIAN FRITTERS.—Wash and drain three ounces of whole rice, put it into a full pint of cold milk, and bring it very slowly to boil, stir it often, and let it simmer gently until it is quite thick and dry. When

about three parts done, add to it two ounces of powdered sugar, and one of fresh butter, a grain of salt, and the grated rind of half a small lemon. Let it cool in the saucepan, and when only just warm, mix with it thoroughly, three ounces of currants, four of apples chopped fine, a teaspoonful of flour and three large, or four small well-beaten eggs. Drop the mixture in small fritters, fry them in butter, from five to seven minutes, and let them become quite firm on one side before they are turned; do this with a slice, drain them as they are taken up, and sift white sugar over them after they are dished.

Rice. Whole rice, 3ozs.; milk, 1 pint; sugar, 2ozs.; butter, 1oz.; grated rind of $\frac{1}{2}$ a lemon; currants, 3ozs.; minced apples, 4ozs.; flour, 1 teaspoonful; a little salt; eggs, 3 large or 4 small.

VENISON BROILED.—Cut thin slices of venison, mix stale crumbs of bread with salt, pepper, and spices, egg the slices, dip in the seasoned bread, broil over a clear fire, and serve with a gravy sauce.

VENISON FRIED.—Cut the meat into thin slices, and make a gravy of the bones. Fry it of a light brown, and keep it hot before the fire. Put butter rolled in flour into the pan, and stir it till thick and brown. Put in half a pound of powdered sugar with the gravy made from the bones, and some red wine. Have it the thickness of cream; squeeze in a lemon, warm the venison in it, put it in the dish, and pour the sauce over.

VENISON HASHED.—Cut nice slices from the venison which may have been left cold, not forgetting to put plenty of fat with it. flour it, place it in a saucenpan, pour over it three half pints of stock gravy, a gill of port wine, a little currant jelly, and two tablespoonsfuls of ketchup; let it simmer gently, it must not boil, or it will make the venison hard; as soon as it is thoroughly hot, add a little salt and cayenne pepper; serve with sippets round the dish. There should be currant jelly on the table.

VENISON, HAUNCH OF, ROASTED.—Take a haunch weighing twelve pounds, and require the butcher to trim off the shinbone and the end of the knuckle; wrap two or three folds of buttered paper, or the eaul of a lamb, closely around the haunch to prevent the fat from burning; spit the haunch, set it before a slow fire, and roast it three hours, basting it frequently with salt and water, to prevent the paper from burning off; then remove the paper or eaul, baste the haunch with butter, set it nearer the fire, and give it a light brown; continue to baste with butter; dredge it lightly with flour, and when it is well frothed and browned on all sides, it is done; wrap a ruffle of cut paper round the knuckle bone, and send the haunch to table with a plain gravy, made from the trimmings of the venison, and seasoned only with a little salt, served with currant jelly. If the venison has hung three or four weeks (and it ought to hang as long before cooking), it will be necessary to remove the outer skin before roasting.

VENISON, JOINTS OF.—The principal



joints are : 1, Haunch. 2, Neck. 3, Shoulder. 4, Breast.

VENISON, MOCK, STEWED.—Take a fat loin of mutton, the outer skin must be stripped off, and the bones cut out. Put the bones into a stewpan with a good-sized onion stuck with cloves, one anchovy, some peppercorns, and a bunch of sweet herbs. Stew for three hours in a small quantity of water, then strain. The mutton should be beaten with a rolling-pin, and nutmeg grated over the inside the previous night. Before it is put in the stewpan, it must be rolled up tight, beginning at the tail end, and tied with a strong string. Add half a pint of port wine to the gravy, and let it stew together for three hours at least. When done, the fat must be skimmed off, and the gravy thickened with a little flour and butter, and a small quantity of ketchup added. A large loin or saddle will require four hours.

VENISON, NECK AND SHOULDER.—The neck and shoulder of venison may be roasted without the paper or caul mentioned above. Lard it with thin slices of salt pork or boiled ham; garnish with sorrel, and make a gravy as above. A shoulder of ten pounds will roast in two hours.

VENISON PASTY.—A shoulder boned, makes a good pastry, but it must be beaten, and seasoned, and the want of fat supplied by that of a fine well-hung loin of mutton, steeped twenty-four hours in equal parts of rape, vinegar, and port. The shoulder being sinewy, it will be of advantage to rub it well with sugar for two or three days; and when to be used, wipe it perfectly clean from it and the wine.

VENISON POTTED.—Cut a piece of venison, fat and lean together; lay it in a dish, and stick pieces of butter all over; tie brown paper over, and bake it; when done, take it hot out of the liquor, drain, lay it in a dish; when cold, take off all the skin,

and beat it in a marble mortar; season with mace, cloves, nutmeg, black pepper, and salt; when the butter that it was baked in is cold, take a little of it and beat in with it to moisten it, after which proceed in the usual manner.

VENISON STEAKS.—The best venison steaks are cut from the saddle; they should be cut three-quarters of an inch thick, and treated like beef steaks; serve with currant jelly.

VENISON, TO CHOOSE.—When good, the fat is clear, bright, and of considerable thickness. To know when it is necessary to cook it, a knife must be plunged into the haunch, and, from the smell, the cook must determine on dressing or keeping it.

VENTILATION.—The importance of ventilation, as applied to the rooms we ordinarily inhabit, is a most important consideration in connection with our health and comfort. When the breath of the human body issues from the chest, being heated to nearly the temperature of the body, it is dilated, and consequently rendered specifically lighter than the surrounding atmosphere: hence it instantly ascends, as wood from the bottom of water, and, before the next inspiration, it is removed out of the way, giving place to purer air. But this natural ventilation, as it may be called, is complete only while we are in the open air: when we are shut up in an apartment, the vitiated air rises, but it is stopped at the ceiling, and preserves its lofty situation only so long as its elevated temperature remains; when it has gradually given out its surplus heat to the walls of the room, it becomes of the same density as the rest of the air, mingles with it, and thus descends to our level, where we are liable to inhale a part of it again, together with a purer portion. From this it is evident that the upper part of a room, next the ceiling, is the place where, in general, the worst air is collected, and of course that is the place for letting it out; but it must be recollect that no air can make its escape from a room, except an equal quantity enter to supply its place; and it follows that there should be a provision made for the entrance of fresh air, as also for the egress of the foul atmosphere. Where a fire is burning in the chimney of an apartment, a certain degree of ventilation is going on constantly, and must go on of itself, without the thought or attention of any person; and this shows the advantage of open chimney fire-places. It is obvious that the current of air, necessary to feed the fire, produces a continual change of all that part of the air which is below the level of the mantelpiece; but this cannot happen without a partial change at least of what is above that level. If the vitiated air be not removed with sufficient rapidity, by the draught of the chimney alone, then some other mode will be necessary in addition. The better class of houses are now constructed with the rooms lofty, and the sashes of the windows made to open at

top and at bottom; and ventilation thus becomes comparatively easy. The warm vitiated air, ascending to the ceiling, finds there sufficient space above our heads, till it cools, and mixes gradually with the rest, as before stated; and if we desire to change the air more completely, we have only to pull down a small part of the upper sash, that the hot air near the ceiling may escape. But this escape of foul air will not always take place while a fire is burning, except certain circumstances be attended to. Should the aperture made by pulling down the top sash be greater than the area of the crevices in the apartments from which the fire was supplied, some cold air will come in by the window, to supply the fire, instead of hot air going out, and the effect of this will be unpleasant. It is, therefore, necessary that some other apertures, at the lower part of the room, should furnish this necessary supply of air to the fire, and permit the warm atmosphere to go off: opening the door for a short time will effect this, or lifting up the lower sash. But this mode of ventilation, though perfectly effectual and easy, cannot be always conveniently put in practice while persons are in the room, on account of the draughts of cold air which must enter. To obtain air without draught is the great object in view. This desirable result may be secured by a contrivance known as the "obliquely perforated glass ventilators." These consist of strips of plate glass, varying from one and a half inches to two inches or more in width, and by means of revolving cutters producing a series of notches in the edges of the strips. By this means, they effectually supply fresh air in any required quantity without draughts, the currents being so

necessarily deflected upwards towards the ceiling, where, mixing with the warmest strata of air, it is gradually diffused throughout the apartment. The manner in which this desirable result is obtained, will be made intelligible by the accompanying illustrations. Fig. 1 is a front view of a window pane perforated on the principle alluded to, the openings in which are not, however, visible. Fig. 2 is a plan view of the perforators; and fig. 3 an edge section of the pane, showing the form of the openings, and the upward direction of the entering currents of air. This beautiful arrangement is produced by simply cutting any approved pattern on the opposite sides (upper and lower edges) of a series of strips of glass, which, being brought together, form a window pane, impervious alike to rain or direct currents of air. The elegant appearance capable of being produced by the great variety of changes that can be made in the colours and patterns, is almost inexhaustible. The designs shown in fig. 1 are but a few of those already in use. The three first patterns, marked A B C, are well

FIG. 2.

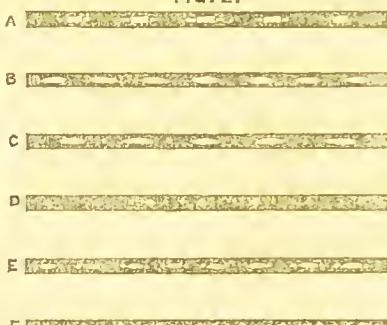
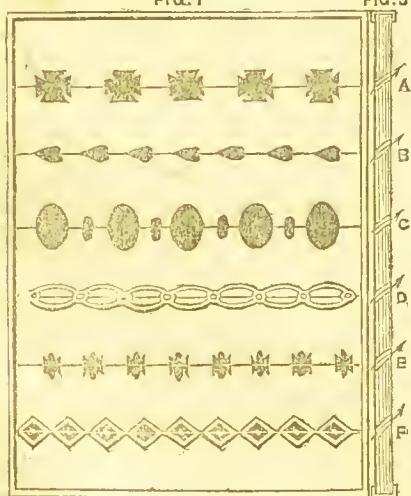


FIG. 1

FIG. 3

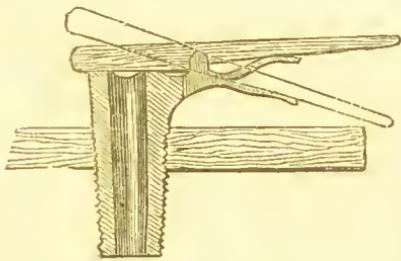


broken up and divided as to enter the room in a continuous but imperceptible manner; besides which, any entering current of air

adapted for public buildings, shops, &c.; while the patterns D E F are suitable for sitting-rooms or bedrooms, and for the latter purpose are strongly recommended by the faculty. In the pattern B, the entering currents are deflected sideways as well as upward, at an angle corresponding to the inclination of the heart-shaped pattern of the cuts. In these ventilators, although the wind blows through hole, it cannot possibly blow upon a person, unless he is in an unusually elevated situation, or the ventilator is misplaced. For ventilating the rooms of an ordinary dwelling-house in which gas is used, the following contrivance is made use of. Through an opening in the ceiling is passed a wide tube, one end of which conveys the foul air to the outside of the house, and the other projects a little below the level of the ceiling. The gas pipe enters on one side, and is bent so as to hang perpendicularly in the centre of the tube, and carries a ring-shaped burner at the lower extremity. The burner is surrounded by a glass chimney, which is supported at its top on a metal conc-piece, and secured to the lower extremity of the tube by

screws. The whole of this arrangement is surrounded by a hemispherical glass shade, the mouth of which is uppermost, and its upper edge is a few inches below the level of the ceiling. The shade is attached at its upper edge by screws to a metal ring, and is hinged to a second ring fixed to the ventilating tube by radial arms. This outer shade can be lowered by means of a cord, for the purpose of lighting or cleaning. A highly polished metal reflector is also added, to increase the effect of the light. The air of the apartment passes off in the strong draught occasioned by the burner, and a fresh supply of air is admitted to the lower part of the room.

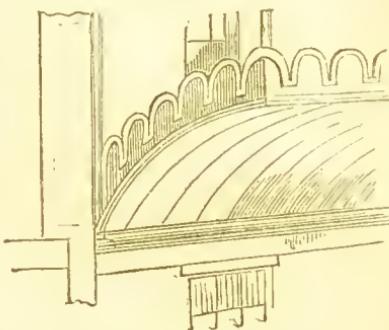
VENT-PEG.—The proper management of the vent-peg is always of great importance in the draught of malt liquors, the object being to avoid the entrance of much air to the vacant space above the liquor in the barrel. Unless some is admitted, the tap will not act. The common vent-peg is perfectly efficient, if it is closed immediately after each draught, and only slightly lifted when more is required, or in fact only when the liquor from the tap ceases to flow freely. A vent-peg which answers its purpose perfectly, is shown in the accompanying figure.



It opens like the key of a flute, and closes itself immediately the hand is withdrawn. Nothing more is required than a small metal tube with a hole through it, closed by a flat key, which works on a side-arm, and is pressed down fast like a flute key.

VERANDAH.—This portion of the dwelling may be constructed of wrought-iron sash bars, cut to the proper length, the upper end let into the wall, and made secure by cement, and the lower ends notched into a cast-iron gutter. The verandah may have an apron in front formed by cast-iron ornaments, screwed to the under side of the gutter, or to the upper part of the iron prongs which support it. No simpler or more durable form of verandah can be well constructed; its roof may be glazed with panes of ground glass, from five inches to ten inches wide, according as the locality is more or less subject to violent hail storms. Where light is not an object, and blue slate abounds, it may be used in plates of any convenient size, stucco, or Roman cement, being employed instead of putty; sheets of copper, zinc, tinmed plates, or rolled iron, may be fixed in the same manner as the glass; or even tarpauling well painted, or

oil-cloth, may also be fixed between the bars. The lightness of appearance may be increased, by bending the bars so as to give a concave form to the upper surface of the roof, as seen in the annexed figure: concave surfaces reflecting more light, and therefore being always lighter or more varied to the



eye, than plain or convex ones. In this and in various other cases of a like nature, where the width of the verandah is not more than four feet, it may be supported by cast-iron brackets of elegant architectural design, firmly built into the wall.

VERB.—A verb is the principal or most important member of a sentence. Whenever we speak or write, we assert or affirm something, or we command or ask a question; and the word in the sentence that does any of these, is called the verb. Thus in the sentences, "James *lives* in Scotland," "Mary *died* last year," the words *lives* and *died*, which make assertions, are verbs. There are many different kinds of verbs, each of which is divided into a number of distinct parts, and has a variety of inflections. For example, in the verb *love*, we have *love*, *loves*, *loved*, *loving*, besides *lovest* and *lovedst* and also various combinations with the auxiliary verbs, as *did love*, *have loved*, *will love*, *is loving*, *is loved*, *may love*, *may have loved*, *would love*, *would have loved*, &c. Verbs are divided into active, neuter, and passive; or, as they are sometimes called, transitive and intransitive. A verb is considered transitive or active when it means some action which passes on to a noun or pronoun immediately following it, as *I love him*; *she wrote a letter*. Hence, when a verb is used transitively, the nominative or subject does something to an object; that is, acts upon it. Thus the action of *loving* is done to him, and that of *writing* to the letter. A verb is considered intransitive or neuter when there is no action upon an object, or when the action is confined to the subject or nominative, and does not require a noun or pronoun to follow immediately, as *he sits*, *she stands*, *they eat*. In these examples there is no transition or passing over to an object. A verb is said to be *passive* when the nominative or subject is acted upon, or in a state produced by something else, as the letter is *written*; *she is deceived*. A passive verb is

always a compound verb in the English language, and consists of the past participle of some transitive verb used along with the auxiliary verb "to be." The regular English verb is divided into two principal parts, *moods* and *participles*. The word "mood" is derived from the Latin word *modus*, a manner or mode, and is applied in grammar to express the manner in which the lending idea of the verb is used. There are the *indicative*, the *conditional* or *potential*, the *imperative*, and the *infinitive* moods. Participles are parts of the verb which participate in the nature of both verbs and adjectives, from which their name is derived. They are of the present and past tenses, and mostly end in *ing* or *ed*, as *she is walking*, *he was frightened*. The *indicative* and *potential* moods are divided into parts called tenses, from the Latin word *tempus* (time). In the regular English verb there are three tenses, the *present*, the *past*, and the *future*, as *I see*, *I saw*, *I shall see*. Each tense has two numbers, the singular and the plural, as *he sees*, *they see*; and each number has three parts, called *persons*, the *first*, *second*, and *third*, as *I see*, *thou seest*, and *he sees*. A verb is said to be *regular* when it forms its past tense and past participle in *ed*, by adding *d* to the radical form if it ends in *e*, and *ed* in other cases, as *love*, *loved*. A verb is called *irregular* when the past tense and past participle are formed in any other mode than by adding *d* or *ed* to the radical form, as *see*, *saw*, *seen*. The *conjugation* of a verb is the regular enumeration of all its parts according to the mood, tense, number, and person, as, *indicative mood*, *present tense*, *singular number*, *first person*, *I love*; *second person*, *thou lovest*; *third person*, *he loves*. *Plural number*, *first person*, *we love*; *second person*, *ye or you love*; *third person*, *they love*. *Past tense*, *first person singular*, *I loved*, &c. *Future tense*, *I will love*, &c. *Potential mood*, *present tense*, *first person singular*, *I may love*, &c.; and the simple *infinitive mood*, *to love*. In the above regular verbs, it may be observed that there are but six inflexions, namely, *lovest*, *loves*, *lovet*, *lovedst*, and *loving*; and from the irregular verb *write*, seven inflexions are produced, namely, *writest*, *writes*, *writteh*, *wrote*, *wrotest*, *writing*, *written*. It should be observed that there are many words in the English language which are spelt in precisely the same manner, and fulfil the two-fold office of verb and noun, as, for instance, *absent*, *compound*, *concert*, *detail*, *extract*, *frequent*, *insult*, *object*, *perfume*, *rebel*, *subject*, *transfer*, &c. When these words are used in the character of verbs, the second syllable must be accented, as *absent'*, *compouud'*, *concert'*, *detail'*, &c.

VERBENA.—This flower should be round, with scarcely any indentation, and no notch or serrature. The petals should be thick, flat, and bright. The plant should be compact, the joints short and strong, and distinctly of a shrubby habit, or a close ground creeper, or a climber; those which partake of all are bad. The trusses of bloom should be compact, and stand out from the foliage, the flowers touching each other, but

not crowding. The foliage should be short, broad, and bright, and enough of it to hide the stalks. The colours should be perfectly clear and distinct; in self colours, no shade should prevail, and in stripes the line where the colours separate should be well defined. The form of the truss should be as nearly flat as possible, so as to show off every individual flower to advantage. The best soil is a mixture of old turfy loam, leaf mould, and peat, in equal parts. If vegetable mould cannot be had, use the loam and sand, and about a sixth part of very rotten dung or good hotbed manure. Beds are best in an open exposure, sheltered by hedges or walls from the north-west, north, and north-east winds. The bed or beds should be long, and not more than four feet wide, and these would contain two rows, allowing them space to spread out a little every way. *The pot culture* of this flower should be practised as follows:—To have good plants, select in April healthy cuttings of the present year's growth, which will soon root with little bottom heat. When rooted, pot off into four-inch pots and replace them where they previously were for a few days, when they may be removed to a cool frame to be gradually hardened. Then shift them into six or seven-inch pots, and place them where they are to bloom. Water at this stage may be given by syringing them in the evening; and as they get established in their pots, more water will be required. Rain-water is preferable; but whether it is rain-water or spring, let it be well exposed to the atmosphere, and take care to have it of the same temperature as the plants are in. As soon as they commence to grow freely, pinch out the tops of the leading shoots. When the lateral eyes have broke sufficiently, thin them out to five or six; as soon as they require support, let them be tied to neat stakes at a proper distance, so that light and air may act on every leaf. If early blooms are not wanted, it will strengthen them very much if they are divested of all trusses as soon as such appear, until the plants get a little advanced. Weak manure water, free from all sediment, may be applied once a week, and when the pots become full of roots, twice a week, which will greatly invigorate them. Decaying trusses should be cut off as soon as the pips begin to drop, and the plants be frequently turned round. When aphides make their appearance, recourse must be had to fumigation with tobacco immediately. A calm evening is best suited for this operation, and two gentle smokings on successive evenings will be found the most effectual. Should mildew make its appearance, dust the affected parts with flower of sulphur the moment the least speck is observed. The best soil for verbenas is composed of equal parts of turfy loam, leaf mould, and cow-droppings (the latter rotted to a black mould), with a small portion of fine river sand, used as rough as the potting will permit.

VERJUICE.—The expressed juice of unripe grapes. It is occasionally used in cooking, and is said to be very serviceable,

used externally, for bruises, where there is no abrasion of the skin. It is made as follows:—Having gathered the grapes when they are fully large, but still quite sour, remove the seeds, and pound the fruit in a mortar with a little salt; having squeezed out the juice, by wringing the bruised grapes in a cloth or putting them into a press, filter it through a jelly-bag several times, until it is perfectly bright; the juice is to be put into very dry and clean bottles, which have been previously exposed to the fumes of brimstone, in the following manner:—Suspend by a wire a small piece of lighted brimstone in the bottle, and when it is burnt out, and there is still a small portion of the vapour left, withdraw the wire, and put in the juice; then cork it immediately.

VERMICELLI.—This is a dried paste, manufactured chiefly in Italy, in the form of smooth round strings. The name has been given to it on account of the worm-like appearance of it, vermicelli in Italian signifying little worms. Macaroni is manufactured of the same kind of paste as vermicelli, and in a similar manner; but it is rather larger in diameter, and is hollow like the tube of a tobacco-pipe.

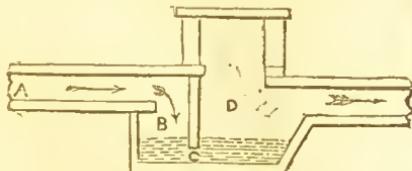
VERMICELLI A LA REINE.—Blanch about a quarter of a pound of vermicelli in boiling water, drain it, and throw it into some rich well-seasoned stock; when tender, take it out of the soup, and put it into the tureen; thicken the soup with eight well-beaten eggs, mixed with half a pint of cream, and pour it when quite hot upon the vermicelli.

VERMICELLI PUDDING.—Boil a pint of milk with lemon-peel and cinnamon, sweeten with loaf-sugar; strain through a sieve, and add a quarter of a pound of vermicelli; boil ten minutes, then put in the yolks of five, and the whites of three eggs; mix well together, and steam it one hour and a quarter.

VERMICELLI SOUP.—Take three quarts of common stock and one of the gravy, mixed together; put a quarter of a pound of vermicelli, blanched in two quarts of water, into the soup, boil it up for ten minutes, and season it with salt if requisite; put it in a tureen with a crust of French roll baked.

VERMICELLI WHITE SOUP.—The same as the above with the addition of the yolks of four eggs, half a pint of cream, and a little salt, mixed well together; simmer it for five minutes. Be very careful to stir it all the time it is on the fire, otherwise it will curdle.

VERMIN TRAPS—The traps especially alluded to here are for cisterns, and their



application will be found of the greatest benefit.

The accompanying engraving represents one of these, which, as will be seen, is simple and efficacious. The drain A may be of any form; the trap D is a sunk area as it were, in its bottom, in which the water will stand as high as represented at C, provided this area be made water-tight, which should be the case. From the bottom of the drain at D, a piece of pavement, if the drain is large, or a tile, if it is small, should project about five or six inches over the sunk part, which will prevent vermin passing that way. The drain should drop in level five or six inches at the other end of the trap, which will keep the water sufficiently low. Another piece of pavement or iron plate may be suspended from the roof of the drain, and of sufficient length to dip three or four inches into the water, which will not only act also as a barrier to vermin, but at the same time will prevent the ascent of noxious effluvia. An eye or opening should be placed immediately over the trap, with a moveable stone or cast-iron cover, closely fitted into a stone or wooden plinth, to admit of the trap being cleaned out or examined occasionally.

VERTIGO.—This distressing malady, which is characterised by giddiness or swimming in the head, is generally only a symptom of some prior disease or functional disturbance. When vertigo arises in cases of fever, or after a lengthened sickness, it is usually the precursor of delirium, and sometimes of coma, and should be met according to the nature of the disease by bleeding, blisters, leeches, or cupping. Sometimes it is the result of fatigue or exhaustion, and frequently proceeds from a debilitated state of the digestive organs; in such cases a small quantity of wine, with a biscuit, will at once relieve it, or where continuous, a little soda and rhubarb, or any stomachics prescribed for DYSPEPSIA, will be found beneficial. When vertigo suddenly attacks a person of robust constitution and florid complexion, apoplexy may be apprehended, and aid should be at once obtained; in the mean time, the patient should be placed in a horizontal position, hot water applied to the feet, and cold to the head; a dose of Epsom salts and a calomel pill taken, and if leeches are at hand, three or four should be placed on either temple. By these means valuable time will have been saved, and probably a fit of apoplexy averted.

VICARAGE CAKE.—Mix a pound and a half of fine flour, half a pound of moist sugar, a little grated nutmeg and ginger, two eggs well beaten, a tablespoonful of yeast, and a tablespoonful of brandy. Make it into a light paste, with a quarter of a pound of butter, melted in half a pint of milk. Let it stand for half an hour before the fire to rise; then add three-quarters of a pound of currants, well washed and cleaned, and bake the cake in a brisk oven.

Flour, 1½ lb.; sugar, ½ lb.; nutmeg and ginger, sufficient; eggs, 2; yeast, 1 tablespoonful; brandy, 1 tablespoonful; butter, ½ lb.; milk, ½ pint.

VICTORIA CAKE.—Take three pounds of flour well dried, two pounds and a half of fresh butter, one pound of loaf sugar pounded,

three-quarters of a pound of candied citron and lemon-peel cut into thin strips, half a pound of sweet almonds, blanched and sliced, three pounds and a half of currants well dried and cleaned, one nutmeg grated, a blade of mace pounded, the yolks of twelve eggs, and the whites of six, beaten separately, bait a pint of fresh yeast, a pint and a half of cream, and a tablespoonful of orange-flower water; first mix the spice with the flour, melt the butter and the cream together, and when cold, add it gradually to the flour, stirring it all the time, add the yeast to the eggs, and strain them into the flour, then add the other ingredients, and beat the whole together for half an hour; line a well-buttered tin with paper, also well buttered, pour in the cake, and bake it in a moderate oven from an hour and a half to two hours.

EGG Flour, 3 lbs.; butter, 2½ lbs.; sugar, 1 lb.; citron and lemon-peel, ½ lb.; almonds, (sweet) ½ lb.; currants, 3½ lbs.; nutmeg, 1; mace, 1 blade; eggs, 12 yolks, 6 whites; yeast, ½ pint; cream, 1½ pint; orange-flower water, 1 tablespoonful.

VINE LEAF VINEGAR.—Take fresh gathered vine leaves with their foot stalks, and any vine shoots of the season that have not at all become woody; of these drop into the cask intended to be used as many as will fill it lightly. These should not be gathered till the liquor is ready to add to them, prepared as follows:—For every gallon of water add two pounds of the coarsest moist sugar, boil it half an hour, skim over a sieve, so that what runs through may be restored. The addition of shells and whites of eggs, or shells only, will assist the leaves. Boil them in the sugar and water, and strain off when done; cool quickly, and work with yeast. When the working begins to subside, the liquor sinks, and the froth draws together in a sort of flat cake; skim it, and put the liquor to the vine leaves in the cask; bung it down, and leave it in a cellar or other convenient place for a month or six weeks; then draw off the liquor clear, empty the cask of the vine leaves, soak, seal, and thoroughly dry it; return the liquor, and with it one pint of vinegar, a handful of chervil, and two ounces of raisins to every gallon. It is now to be treated just as the treacle vinegar.

VINE LEAF WINE.—The leaves are best when young; at any rate they should not be full grown, and must be plucked with their stems; the tendrils are equally useful; they may be taken from vines from which no fruit is expected, or from the summer prunings; when tainted with soot, they must be carefully washed. Forty or fifty pounds of such leaves being put into a tub, seven or eight gallons of boiling water are to be poured on them, in which they are to infuse for twenty-four hours; the liquor being poured off, the leaves must be pressed in a press of considerable power; and being then washed with an additional gallon of water, they are again to be pressed. Thirty pounds of sugar and a quarter of a pound of tartar are now to be added to the mixed liquor, and the quantity being made up to seven gallons, the process recommended in

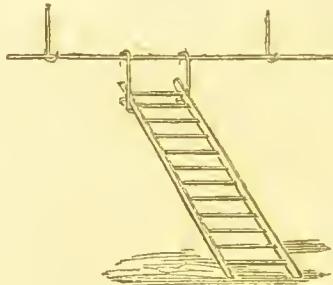
the case of gooseberries is to be followed; or that for ripe currants, if a sweet wine is desired.

VINEGAR FROM APPLES.—Take a bushel of sour apples, cut them up or pound them, place them in a large tub, they will shortly begin to ferment; then add some water, which they will soon absorb; keep adding, day by day, as much water as they will absorb. At the end of a month strain off the liquor into a cask; to every gallon of liquor add half a pint of vinegar, hot, that has been previously boiled and reduced from one pint; let it remain for six weeks, and there is an excellent vinegar.

VINEGAR OINTMENT.—Take a pound of olive oil and four ounces of white wax, allow them to cool partially, add two ounces of vinegar, and stir till cold. This forms a cooling astringent dressing for irritated and inflamed eyelids.

VINEGAR WHEY.—Pour into boiling milk as much vinegar as will make a small quantity quite clear, dilute with hot water to an agreeable sharp acid, and add a little sugar. This preparation is less heating than if made of wine; and if the exciting of perspiration is all that is desired, it will answer the purpose very well.

VINERY LADDER.—This is used for thinning grapes. The three-quarter inch iron rod, which reaches from one end of the viney to the other, is suspended about two feet from the rafters by the iron rods, the ends of which are turned up to support



it. On the rod, hang the irons which support the ladder. This ladder is very useful for pruning vines and thinning grapes, which are on a roofed trellis over a stage of greenhouse plants.

TINGT-ET-UN.—The game of vingt-et-un, or twenty-one, may be played by two or more people; and, as the deal is advantageous, and often continues long with the same person, it is usual to determine it at the commencement by turning up the first ace, or any other mode that may be agreed upon. The cards must all be dealt out in succession, unless a natural vingt-et-un occurs, and in the mean time the jeune, or youngest hand, should collect those that have been played, and shuffle them together, ready for the dealer, against the period when he shall have distributed the whole pack. The dealer is first to give two cards, by one at a time, to each player, including himself; then to ask every person in rotation, beginning with

the eldest hand on the left, whether he stands or chooses another card, which, if required, must be given from off the top of the pack, and afterwards another or more, if desired, till the points of the additional card or cards, added to those dealt, exceed or make twenty-one exactly, or such a number less than twenty-one as may be judged proper to stand upon; but when the points exceed twenty-one, then the cards of that individual player are to be thrown up directly, and the stakes to be paid to the dealer, who also is, in turn, entitled to draw additional cards; and, on taking a vingt-et-un, is to receive double stakes from all who stand the game, except such other players likewise having twenty-one, between whom it is thereby a drawn game, and when any adversary has a vingt-et-ua, and the dealer, not then the opponent, so having twenty-one wins double stakes from him. In other cases, except a natural vingt-et-un happens, the dealer pays single stakes to all whose numbers, under twenty-one, are higher than his own, and receives from those who have lower numbers; but nothing is paid or received by such players as have similar numbers to the dealer; and when the dealer draws more than twenty-one, he is to pay to all who have not thrown up. Twenty-one, whensoever dealt in the first instance, is styled a natural vingt-et-un, should be declared immediately, and entitles the possessor to the deal, besides double stakes from all the players, unless there shall be more than one natural vingt-et-uu; in which case the younger hand or hands, so having the same, are excused from paying to the eldest, who takes the deal of course. *Observe:*—An ace may be reckoned either as eleven or one; every court card is counted as ten, and the rest of the pack according to their points. The odds of this game merely depend upon the average quantity of cards likely to come under or exceed twenty-one; for example, if those in hand make fourteen exactly, it is seven to six, that the one next drawn does not make the number of points above twenty-one; but if the points be fifteen, it is seven to six against that hand; yet it would not, therefore, always be prudent to stand at fifteen, for as the ace may be calculated both ways, it is rather above an even bet that the adversary's two first cards amount to more than fourteen. A natural vingt-et-un may be expected once in seven coups, when two, and twice in seven, when four people play, and so on, according to the number of players.

VIOLET.—The sweet violet (*viola odorata*) as a native of this country, is quite hardy;

and the single Russian variety, which will blow all winter, even during frost and snow, is still harder, and from producing a few runners, requires little room; but the Neapolitan variety is rather more delicate, and apt to

perish. There are eight varieties, which may be cultivated, either in the open border, or in frames or pots, when required to flower in winter, the Neapolitan being the best for this purpose. The white is both the earliest and latest in blooming, and is very sweet scented. The single Bauksian is an early bloomer, but rather tender. *Soil and seed sowing.*—The seed which ripens in summer from apetalous flowers, may be sown in the same manner as already directed for heart's ease. The seedling plants must be managed precisely like runners, as shall presently be stated. *Runners.*—As it is important to have a good supply of runners as early in the year as possible, these may be promoted by sifting a little soil or leaf mould over the old plants, and then watering them, as soon as they have done showing petalous flowers, in May, or the end of April; apetalous flowers produce all summer. The runners, when taken off, should be planted in light garden mould, or loam and peat, without any manure, at the foot of a south wall, in rows six inches apart, and four inches from plant to plant in the rows. They will soon strike root, and be ready about the end of July for removal to any part of the garden, where the soil is light. They may now be planted nine inches asunder, and the soil ought to be frequently loosened with the hoe, to allow their roots to extend. *Planting out.*—The first week in August, prepare a bed, in a western exposure, of the size of the frame to be placed over it, by digging out the old soil about two feet in depth, and lay in the bottom, about nine inches thick of broken pots, or brick rubbish, in order to drain it thoroughly. Upon this, lay one foot thick of a compost, composed of two barrow-loads of leaf mould, one barrow-load of sandy loam, one barrow-load of well rotted dung, and half a barrow-load of sharp sand; the whole well incorporated, and turned over frequently for twelve months before it is used. When the bed has been allowed to settle for a few days, the plants must be carefully taken up, their runners trimmed off, and planted four to six inches apart every way. If possible, they should not, according to Paxton, whom we have followed, be more than fifteen inches from the glass, giving them occasional gentle waterings before sunset. *After-management.*—When the nights begin to be cold, place the frame over them, and put on the lights at night and in rough weather; but during the whole autumn, with these exceptions, the lights should be kept off. The frame will require to be well lined with dry litter, to exclude frost, and mats will also be required. As soon as the plants show flower, it is not necessary to give them any air, except to dry them occasionally, if the weather should prove wet. By this means longer stalks are obtained, while the moisture of the frame, caused by evaporation, induces the buds to expand more freely. They will come into flower in December, and continue flowering till February or later. In a southerly aspect, the frames will require shading from the mid-day sun in March and April. To insure a succession of flowers, transfer some plants



to another bed, about six weeks after the first. More hand-glasses, also, may be filled with cuttings; these are required for the frames, and if cuttings are allowed to remain under them without protection, they will flower exceedingly well after those in the frames are over.

VIOLET PASTE.—A preparation of this name, used for confectionery, may be made as follows:—Take two pounds of violet flowers, and reduce them to pulp in a mortar, adding the juice of two lemons; boil two pounds of sugar to a thick syrup, and then add the mixture from the mortar, and with it a pound of apple jelly; let them simmer until they are sufficiently thickened to form a paste, which is to be rolled out, and dried on plates in the sun, or in a slow oven.

VIOLET FLOWERS, 2lbs.; lemons, juice of 2; sugar, 2lbs.; apple jelly, 1lb.

VIOLET PERFUME.—Drop twelve drops of oil of rhodium on a piece of loaf-sugar, grind this well in a glass mortar, and mix it thoroughly with three pounds of orris-root powder. This will resemble the perfume of violet. If more oil of rhodium be added, a rose perfume, instead of violet, will be produced.

VIOLET POWDER, TO APPLY.—Violet or baby's powder affords the best dressing for a blister, after having first poulticed the place for a few minutes. Instead of the ointment generally employed for the healing process, dust the blistered surface frequently with violet powder; and the pain and tedium usually attending the healing of a blister will be quite avoided.

VIOLETS, SYRUP OF.—Infuse a pound of fresh violet flowers in two pints and a half of water for a day, press out the liquor, and in every pint dissolve four pounds of sugar; skim and boil to a syrup.

VIPER, BITE OF.—Above the part bitten a ligature or bandage should be applied tightly, as quickly after as possible, so as to prevent the absorption of the venom, and its passage into the blood; the puncture should then be washed with constantly changed warm water, sucked or cupped, and lastly some caustic, the nitrate of silver, rubbed into the punctures, and the part dressed with a warm emollient poultice; the ligature being kept on for some hours after these precautionary measures have been adopted. There is, generally, much constitutional anxiety, faintness, retching, and very great debility, attended often with the vomiting of a large quantity of dark coloured bile. To counteract these depressing symptoms, a good draught of hot brandy and water, with twenty drops of sal volatile and ten drops of ether, should be given immediately, and repeated according to circumstances every quarter or half hour, with or without a one grain opium pill with the first two doses; a large mustard plaster, made of equal parts of mustard and flour, laid on the stomach. The patient should be placed in bed in a darkened room, kept remarkably quiet, and the feet of a steady heat, with hot bricks or bottles of water.

VIRGINIAN CREEPER.—This is another plant that is not indebted to its flowers for its beauty; but its leaves assume a rich red tint during the autumn months. It is an exceedingly free grower, and all its pruning merely consists in keeping it within regular bounds. Any good, rich, loamy soil is suitable for this plant. It is necessary, however, that they should have a border of such soil extending at least three feet from the base of the wall to which they are attached, and that this soil should have been well dug previous to planting. The winter months are the best for planting this species of creeper.

VISITING, ETIQUETTE OF.—Friendly visits may be made in the forenoon; the toilet should be neat without being costly. Visits to give invitations to dinner-parties or balls, should be of short duration, and made in the afternoon. Visits of condolence should be paid within from a week to a fortnight after the funeral of the deceased; friends of less intimacy should make inquiries, and leave cards. A formal visit should never be made before noon. If a second visitor is announced, it is proper for the first visitor to retire, unless he is very intimate both with the host and the visitor announced, or unless the host expresses a wish that the first visitor shall remain. Visits after balls or parties should be made within a month. In the latter, it is customary to enclose your card in an envelope, bearing the address outside; this may be sent by post, if you reside at a distance; but, when residing in the neighbourhood, it is polite to send your servant, or to call. In the latter case, a corner of the card should be turned down. When a new visitor enters a drawingroom, if it be a gentleman, the ladies bow slightly; if a lady, the guests rise. On such occasions, the hat should be held in the hand, unless requested to place it down; then lay it beside you. The last arrival in a drawing-room takes a seat left vacant near the mistress of the house. A lady is not required to rise on receiving the visit of a gentleman, nor to accompany him to the door. When the visitor retires, ring the bell for the servant; you may then accompany your guest as far towards the door as the circumstances of your friendship seem to demand. Request the servant, during the visits of guests, to be ready to attend to the door the moment the bell rings. When you introduce a person, pronounce the name distinctly, and say whatever you can to make the introduction agreeable, such as, "an old and valued friend," "a schoolfellow of mine," "an old acquaintance of our family." Never stare about you in a room, as though you were mentally taking stock of its contents. Be hearty in your reception of guests, and when you detect diffidence, assist the stranger to throw it off. A lady does not put her address on her visiting card.

VITRIOL, ACCIDENTS FROM, TO REMEDY.—Such accidents are not uncommon in kitchens, as when oil of vitriol (improperly used for cleaning copper vessels) is let

fall on the hands, &c. In this case, if a little soda or potash be dissolved in water, or some fresh soap-boilers' lees, and instantly applied, no injury whatever will occur to the person or clothes.

VOICE, MANAGEMENT AND PRESERVATION OF.—A weak voice is often the effect of general weak health, and in proportion as the body can be strengthened, so will the voice become stronger. Perhaps medical advice may be requisite as to the general health of the body or state of the lungs; if so, it should be obtained; but, under any circumstances, avoid quacks and advertised nostrums. The following rules for strengthening the voice will be found useful:—1. Be very temperate in eating and drinking. 2. Avoid causes of excitement, mental or bodily. 3. Read or recite daily about five hundred lines, in the highest speaking tone which you can comfortably maintain. *Speeches delivered in public* are often marred by unpractised speakers, from the want of attention to the simplest rules, as follows:—Speak slowly, and give every word its due emphasis. Pitch the voice in the proper key, neither too high nor too low, otherwise the whole of the speech will prove harsh and ineffective. Direct the voice to about the centre of the room, and about midway from the floor; by this means every word will reach the ears of all present. *The following hints to vocalists* will be also found beneficial:—When about to sing, let the body be in a simple unconstrained posture. Practise two or three times a day, but at first not longer than ten minutes at a time, one of which should be before breakfast. Exercise the extremities of the voice, but do not dwell upon those notes you reach with difficulty. Open the mouth widely at all times, in the higher notes especially; open it to the ears, as if smiling. Never dwell upon consonants. When you are about to sing, read the words, and master their meaning, so as to give them the proper expression. Let every word be heard distinctly: disregard of this rule is a common fault among singers of every kind and degree. Children should never be allowed to sing much, or to strain their voices; the age of fifteen or sixteen is soon enough to begin to practise constantly and steadily the two extremities of the voice. The voice is said to have gained its greatest power at the age of twenty eight, and to begin to decline soon after forty. Never force the voice in damp weather, or when in the least degree indisposed; persons often sing out of tune at such times, when they do not at others. Take nothing to clear the voice but a glass of cold water, and always avoid pastry, rich cream, coffee, cake, nuts, &c., when you intend to sing.

VOL AU VENT.—Roll off tart paste till about the eighth of an inch thick; then, with a thin cutter made for that purpose (about the size of the bottom of the dish you intend sending to table), cut out the shape, and lay it on a baking-plate with paper, rub it over with yolk of egg; roll out a good puff paste an inch thick, stamp it

with the same cutter, and lay it on the tart paste, then take a cutter two sizes smaller, and press it in the centre nearly through the puff paste; rub the top with yolk of egg, and bake in a quick oven about twenty minutes of a light brown colour; when done, take out the paste inside the centre mark, preserving the top; put it on a dish in a warm place, and when wanted, fill it with a white fricassee of chicken, rabbit, ragout of sweetbread, or any other entrée you may wish.

VOLATILE BISCUITS.—Mix one pound of flour, half a pound of loaf sugar, and a quarter of a pound of butter into a paste, with two eggs and a teaspoonful of carbonate of ammonia dissolved in a little milk.

VOMITING.—When not the consequence of accidents or injuries to the head, or from herina, or some affection of the bowels, vomiting or sickness generally proceeds from some derangement of the stomach, or else from the effect of some irritating or poisonous substance received into it through accident or design. In such cases as the latter, an emetic of antimony or ipecacumha should be taken to expel the noxious substance as quickly as possible, as explained under the head of POISONS. For repeated and exhausting sickness, such as attends a bilious attack, the following draught should be taken every half hour. Take of

Camphor water	1 ounce
Sul volatile	20 drops
Spirits of lavender	½ drachm

Mix. A small mustard plaster should be applied to the pit of the stomach, the patient at the same time keeping in an inclined position on his back, as frequently as possible. Sometimes simply lying on the back, drinking a copious draught of cold water, with cold wet napkins applied to the stomach, will relieve the most aggravated cases of vomiting. But where no relief can be obtained, a medical man should be instantly sent for.

VOWELS.—These parts of speech are frequently mispronounced or altogether omitted by careless speakers; and the truth of this assertion will be borne out by a glance at the following examples of error. For instance, *a* is often made to take the sound of *e*, and we hear—

ketch	for catch
gather	for gather
thank	for thank
acceptable	for acceptable

Or of *u*, as:—

veteran	for veteran
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The sound of the vowel *e* is often changed into *i*, as:—

kettle	for kettle
forgit	for forget
intirely	for entirely

Or into *a*, as:—

arrand	for errand
varjuice	for verjuice

All the other vowel sounds are equally confounded, hence we hear:—

sensable	for sensible
possible	for possible
stoold	for stupid
gal	for girl
jest	for just
eval	for evil
reg'lar	for regular
redie'lous	for ridiculous
pertie'lar	for particular
impedence	for impudence
mischievious	for mischievous
moutain'eous	for mountainous
tremenduous	for tremendous

These are not so much the mistakes of ignorance as of carelessness, and might easily be avoided by remembering to give each vowel its full, simple, and proper sound.

W.

WADDING FOR GUNS.—Gun waddings are as varied as most of the other gun appendages. Whatever wadding is chosen, the gauge of the barrel should be borne in mind; a stiffer wadding should be employed for a large than a small bore; and it is always essential to comfort as well as safety, that whatever wadding be used, it should exactly fit the barrel. Different waddings have different effects on both the range and the force of the delivery of the shot. In the use of waddings of any kind it should be especially observed, that where there is no vent-hole to the breech, a resistance is offered to the descent of the wadding, and in the attempt to force the wad down, the powder is liable to be either pressed or disturbed. It also happens that some considerable impediment is experienced to the passage of the shot wad of some of the kinds in vogue; in such a case, a small hole made in either or both of the waddings will obviate the inconvenience. Although there are many kinds of ready-made waddings in existence, which are all more or less excellent in their way, the great difficulty is to obtain them of an exact fit. To obviate this drawback, it is not unusual to have a wadding punch made for each gun. In using these instruments, it is common to use lead to punch on; but close-grained wood will be found preferable, and answer the purpose better. Let a wooden block be firmly placed, presenting so large a surface that it may not become worn into cross ridges, which will prove unfavourable to either the scraping or planing of it when it becomes necessary to gain a level surface; for unless the block be level, the wads will not be cut clean.—See SPORRING, GUN, &c.

WAFER BISCUITS.—Add one ounce of butter and the white of one egg well beaten to one pound of flour; mix them with as much cream or good milk as will make a

thick paste; work the paste up well till it is as fine as glass; then cover it over, and set it before the fire for twenty minutes; break it in pieces the size of a walnut, roll it out as thin as a wafer, using as little flour as possible in doing it. Bake about three minutes in a quick oven.

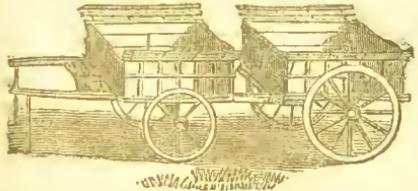
WAFERS.—In making common wafers for securing letters, wheat flour is mixed with isinglass and white of egg into a paste; the paste is spread evenly over tin plates, several of which are piled one on another and put into an oven. The layer becomes thus both baked and polished. When baked, the layers are taken from the tins, piled into a heap an inch or more in depth, and cut into wafers by means of hollow punches. They are coloured with the usual mineral colouring materials. Medallion wafers are made of very pure glue, coloured to any desired tint. A seal or medallion is moistened with a weak solution of either white or coloured gum, which gum is wiped off all except the sunken part. The glue is then poured over the medallion in a thin layer; and the result produced is a medallion wafer, either white or coloured, but standing out in relief from the ground of another colour. Isinglass or gelatine wafers are made of a coloured solution of isinglass, which is poured in a very thin layer on a glass plate, and afterwards cut into any desired form.

WAGES.—The following table shows at a glance the daily, weekly, and monthly rate of wages, according to the sum paid for the year:—

Per Year.	Per Month.	Per Week.	Per Day.
£ s. d.	£ s. d.	£ s. d.	£ s. d.
1 0 0	0 1 8	0 0 4½	0 0 0½
1 10 0	0 2 6	0 0 7	0 0 1
2 0 0	0 3 4	0 0 9½	0 0 1½
2 2 0	0 3 6	0 0 9½	0 0 1½
2 10 0	0 4 2	0 0 11½	0 0 1½
3 0 0	0 5 0	0 1 1½	0 0 2
3 3 0	0 5 3	0 1 2½	0 0 2
3 10 0	0 5 10	0 1 4½	0 0 2½
4 0 0	0 6 8	0 1 6½	0 0 2½
4 4 0	0 7 0	0 1 7½	0 0 2½
4 10 0	0 7 6	0 1 8½	0 0 3
5 0 0	0 8 4	0 1 11	0 0 3½
5 5 0	0 8 9	0 2 0½	0 0 3½
5 10 0	0 9 2	0 2 1½	0 0 3½
6 0 0	0 10 0	0 2 3½	0 0 4
6 6 0	0 10 6	0 2 5	0 0 4½
6 10 0	0 10 10	0 2 6	0 0 4½
7 0 0	0 11 8	0 2 8½	0 0 4½
7 7 0	0 12 3	0 2 10	0 0 4½
7 10 0	0 12 6	0 2 10½	0 0 4½
8 0 0	0 13 4	0 3 1	0 0 5½
8 8 0	0 14 0	0 3 2½	0 0 5½
8 10 0	0 14 2	0 3 3½	0 0 5½
9 0 0	0 15 0	0 3 5½	0 0 6
9 9 0	0 15 9	0 3 7½	0 0 6½
10 0 0	0 16 8	0 3 10	0 0 6½
10 10 0	0 17 6	0 4 0½	0 0 7
11 0 0	0 18 4	0 4 3	0 0 7½
11 11 0	0 19 3	0 4 5½	0 0 8
12 0 0	1 0 0	0 4 7½	0 0 8

Per Year.	Per Mouth.	Per Week.	Per Day.
£ s. d.	£ s. d.	£ s. d.	£ s. d.
12 12 0	1 1 0	0 4 10	0 0 8 $\frac{1}{2}$
13 0 0	1 1 8	0 5 0	0 0 8 $\frac{1}{2}$
13 13 0	1 2 9	0 5 3	0 0 9 $\frac{1}{2}$
14 0 0	1 3 4	0 5 4 $\frac{1}{2}$	0 0 9 $\frac{1}{2}$
14 14 0	1 4 6	0 5 8	0 0 9 $\frac{1}{2}$
15 0 0	1 5 0	0 5 9	0 0 10 $\frac{1}{2}$
15 15 0	1 6 3	0 6 0 $\frac{1}{2}$	0 0 10 $\frac{1}{2}$
16 0 0	1 6 8	0 6 2	0 0 10 $\frac{1}{2}$
16 16 0	1 8 0	0 6 5 $\frac{1}{2}$	0 0 11
17 0 0	1 8 4	0 6 6 $\frac{1}{2}$	0 0 11 $\frac{1}{2}$
17 17 0	1 9 6	0 6 10	0 0 11 $\frac{1}{2}$
18 0 0	1 10 0	0 6 11	0 0 11 $\frac{1}{2}$
18 18 0	1 11 6	0 7 3	0 1 0 $\frac{1}{2}$
19 0 0	1 11 8	0 7 3 $\frac{1}{2}$	0 1 0 $\frac{1}{2}$
20 0 0	1 13 4	0 7 8	0 1 1 $\frac{1}{2}$
30 0 0	2 10 0	0 11 6	0 1 7 $\frac{1}{2}$
40 0 0	3 6 8	0 15 4 $\frac{1}{2}$	0 2 2 $\frac{1}{2}$
50 0 0	4 3 4	0 19 3	0 2 9
60 0 0	5 0 0	1 3 0 $\frac{1}{2}$	0 3 3 3 $\frac{1}{2}$
70 0 0	5 16 8	1 6 11	0 3 10
80 0 0	6 13 4	1 10 9	0 4 4 $\frac{1}{2}$
90 0 0	7 10 0	1 14 7 $\frac{1}{2}$	0 4 11
100 0 0	8 6 8	1 18 5 $\frac{1}{2}$	0 5 5 $\frac{1}{2}$
200 0 0	16 13 4	3 16 11	0 10 11 $\frac{1}{2}$
300 0 0	25 0 0	5 15 4 $\frac{1}{2}$	0 16 5 $\frac{1}{2}$
400 0 0	33 6 8	7 13 10	1 1 11
500 0 0	41 13 4	9 12 3 $\frac{1}{2}$	1 7 4 $\frac{1}{2}$
600 0 0	50 0 0	11 10 9	1 12 10 $\frac{1}{2}$
700 0 0	58 6 8	13 9 2 $\frac{1}{2}$	1 18 4 $\frac{1}{2}$
800 0 0	66 13 4	15 7 8 $\frac{1}{2}$	2 3 10
900 0 0	75 0 0	17 6 1 $\frac{1}{2}$	2 9 3 $\frac{1}{2}$
1000 0 0	83 6 8	19 4 7 $\frac{1}{2}$	2 14 9 $\frac{1}{2}$

WAGGON.—This vehicle is constructed in a variety of forms, and of various dimensions. Hood's patent waggon, as shown in the engraving, is a contrivance whereby in a few minutes the same carriage may be changed by the driver into two complete carts of the common dimensions, and applicable to all the uses of carts in general; or into one waggon, so complete that a narrow inspection is necessary to distinguish it from an ordinary waggon. The carts have a contrivance to render them more safe and



easy to the horse in going down a hill, and have moveable side-ladders, which will be found of great use in carrying corn, bark, &c. The one-horse waggon is an excellently designed machine. The wheels are cylindrical, and the breadth of six inches. The draught is by what is called a draught spring. By these draught springs, the inventor says, a carriage will be put in motion

by little more than half of the power that would be necessary without them, and the benefit will continue during all the time that the carriage may be continued in motion.

WAISNCOAT, TO CLEAN—Mix together four ounces of powdered quick-lime and four ounces of potash, and boil them for half an hour in three quarts of water; let the mixture stand until it is quite cold and clear; then pour the clear liquid off, dip a painter's brush into it, and pass it over the surface of the wood in the same manner as for painting; immediately afterwards washing with cold water. This mode of cleaning will frequently render a fresh coat of paint unnecessary, and it has the advantage of being destructive to the eggs of insects which may be deposited in the crevices of the wood. Where there is reason to suspect that bugs are in the wood, it may be well as an additional precaution to add to the mixture two drachms of corrosive sublimate.

WALKING, AS AN EXERCISE.—Walking is perhaps the readiest mode of taking exercise, and the one most extensively resorted to. If it brought the upper part of the body as thoroughly into exertion as the lower, it would be perfect, for it is gentle and safe with nearly all except the much debilitated. To render it the more effectual in the upper part of the body, it were well to walk at all times, when convenient, singly, and allow the arms and trunk free play. It is best to walk with a companion, or for some definite object, as the flow of nervous energy will be by these means promoted, and the exercise be rendered, as has already been explained, the more serviceable. Very long or rapid walks should not be attempted by individuals of sedentary habits, nor by weakly persons; their frames are totally unprepared for such violent exertion. When a person who has been long confined at still employments finds himself at liberty to indulge his inclination for a ramble of a few days in the country, he should begin with slow and short marches, and be content therewith till his body is hardened for greater efforts. Every summer many youths, from ignorance, do themselves great injury by undertaking pedestrian excursions much beyond their strength. Jaded to the last degree, and incapable of enjoying anything presented to their observation, they nevertheless persist in making out some appointed number of miles per day, never once thinking of the outrage they are committing upon themselves, and only looking to the glory of executing their task, the only pleasure they find in the journey. Serious consequences—consumption—not unfrequently follow such ill-advised and senseless efforts.

WALKING, CORRECT METHOD OF.—To walk gracefully, the body must be erect, but not stiff, and the head held up in such a position that the eyes are directed forward. The tendency to bend forward the head, and stoop the shoulders, which many persons have, must be avoided, as being not only awkward, but injurious. At the same time, strutting and pomposity are not to be indulged in. An easy, firm, and erect posture is alone desirable. In walking, it

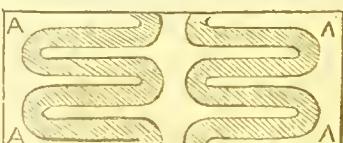
is to be borne in mind that the locomotion is to be performed entirely by the legs, not rolling from side to side, and helping forward each leg alternately by advancing the haunches. In placing the foot down, the toe must first touch the ground, and not the heel, which mode of proceeding gives a very awkward appearance to the gait. The toes are to be turned out, but not excessively, a habit almost as unsightly as turning the toes in. The arms should move simultaneously with the legs, but easily, and with a moderate degree of motion only. Ladies generally present a more graceful appearance, with one or both of the arms partly raised when walking. Custom leads us to regard the hanging of the arms by the side, on the part of a female, as somewhat too masculine.

WALL-FLOWER—The double varieties of this plant, require some protection through severe weather in winter such as a mat, or if scarce, a cold frame is sometimes awarded them; for these the Lancashire growers are celebrated, and we have seen some really magnificent specimens in their gardens. To make fine plants of these, cuttings should be taken in July or August, and struck under a hand-light on a shaded border, following them, as soon as it is known they are rooted, in sandy loam or leaf mould; such plants become well established before the winter, and in spring, when placed in the open borders, grow luxuriantly, and are speedily covered with flowers. The single kinds are usually treated as annuals; a sowing is made about the time recommended for striking the double varieties, and they are afterwards removed to final stations.

WALL FRUIT, TO PROTECT.—For this purpose, the following contrivance will be found to answer:—Lay a board one foot wide, on brackets under the coping of the wall, supporting it by uprights, two and a half inches square, which rest on sheds driven into the ground, at eighteen inches' distance from the wall. These uprights are ten feet apart the whole length, and the two ends are close boarded with half-inch stuff. Two inches under the top board a rod of iron should be fastened from upright to upright, and on these curtains fitted, which are formed of two breadths of coarse, close, stout canvas, having large tinned-iron rings fastened on the top. One side of each curtain is then fastened to each upright, and they draw and meet in the middle, lapping well over, and are tied together with a few pieces of tape, or else a few large hooks and eyes. The whole apparatus is moveable, and with care, will last many years.

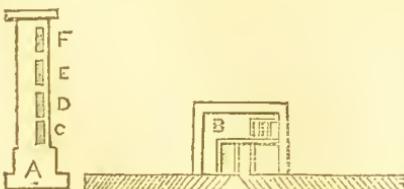
WALLS.—In the construction of walls, it is essential that the stones be either taken from the quarry, or consist of the largest land-stones, broken in such a manner as to have a good flat surface, in order that they may bind well; that they be built by masons, and well pinned; that they have as dry and deep a foundation as possible in order to guard against frosts, &c.; that they may be made wide at the bottom, and tapering upwards when the coping is to be applied; that the coping consists of mate-

rials that cannot be readily overturned or removed, for, upon the manner in which it is finished, much of the future value and durability of the wall will be found to depend. Independently of the ordinary walls of stone, there are others, made of various materials, and constructed in several ways. *Turf walls* form a fence for enclosing fields, and for the formation of folds, pens, or other places of confinement for cattle during the night. In general they are made with turf only, pared off from the adjoining surface, and used without any mixture of earth; in other cases, the wall consists of a fencing of turf on each side, while the space between is filled up with loose earth. *Stone and turf walls* are also very common in many situations, and are frequently employed from necessity, when other materials are expensive or procured with difficulty. *Mud walls with a mixture of straw* are also used. In the construction of these, a small quantity of straw should be taken, and incorporated with a sufficient proportion of clay; the straw in this case, answering the same purpose as hair in lime-plaster; when a sufficient number of small masses are made, the work is begun by laying a stratum at the bottom of the embedded wall; this being done, and the different pieces firmly kneaded together upon the hand, a flat deal board is applied on each side, which, being properly pressed and rubbed against the building in a horizontal direction, not only serves to consolidate the work, but gives it a degree of smoothness and uniformity; successive strata are added, till the wall is raised to the intended height, care being taken to taper it gradually upwards. Walls made in this way will last for many years; and, if washed with lime at the proper season of the year, will have an appearance no way inferior to such as are made with stone and lime. Walls may also be made of rammed earth. In constructing them, the earth is previously pounded, in order to crumble any stones therein; clay is added in a small quantity, about one eighth part. It is all beaten and mixed up together by repeated blows of the mallet. The earth being thus prepared, and slightly wetted, the foundation of the wall is dug. This is laid with stone; and, when it is about one foot high above the surface of the ground, planks are arranged on each side, and the space between filled with earth intended for the wall; this method is continued successfully until the wall is completed. Stamped earth walls are prepared by the earth being put into a mould or box of any size, as seen in the engraving.



This mould is a strong oaken or iron box, and the earth being placed in it, is com-
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pressed either by the action of a press acted upon by a lever or screw, or great forge-hammer. The stone, or solid body of earth thus acquired, is then used in the same way as common hewn stonewall, and either bedded or merely jointed with lime-mortar; it is then washed with lime, both for effect and duration. Walls for gardens, orchards, and general horticultural purposes are usually built in paucels, from fifteen to thirty feet in length, one brick thick, with pillars at specified distances, for the purpose of adding to their strength, and the foundation of a brick and a half thick. The following plan of building a wall is worthy of adoption, as it is equally durable as the ordinary kind, and saves one-third of the expense. Form the wall hollow, nine inches in breadth, by placing the bricks edgewise, so as to represent two facings, lay them in good mortar, and carefully finish the joints. The bricks are placed alternately, with their faces and ends to the outside, so that every second brick is a tie, and on each succeeding course, a brick with its end outside is placed on the centre of one laid lengthwise on either side. The top of the wall must be covered with a coping of stone or bricks projecting eight inches. It is strengthened at every twenty feet by pieces of fourteen-inch brick-work, built in the same manner with bricks laid on edge. In no instance, should a wall be lower than eight feet. The thickness usually varies with the height of the wall—being nine inches if it is not higher than eight feet; thirteen and a half inches if above eight, and under fourteen feet; and eighteen inches from fourteen up to twenty feet. Walls so constructed, become dry after rain much more rapidly than a solid wall of the same or any other thickness, whilst they ripen the fruit equally well. Inclined or sloping walls have been recommended, but have always failed in practice; for although they receive the sun's rays at a favourable angle, they retain wet, and become so much colder by radiation at night than perpendicular walls, that they are found to be unfavourable to the ripening of fruit. The *faced wall* or *hot wall* is generally built entirely of brick, though where stone is abundant and more economical, the back or north side may be of that material. A flued wall may be termed a hollow wall, in which the hollow part is thrown into compartments A, to facilitate the circulation of smoke and heat from the base or surface of the ground, to within one or two feet of the coping.



Such walls are generally arranged with hooks inserted under the coping, to

admit of fastening some description of protecting covers, and sometimes for temporary glass frames. A length of forty feet, and from ten to fifteen feet high, may be heated by one fire, the furnace of which, B, being placed one or two feet below the surface of the ground, the first course or flue, C, will commence one foot above it, and be two feet and a half, or three feet high, and the second, third, and fourth courses, D, E, F, narrower as they ascend. The thickness of that side of the flue next the south, or preferable side, should, for the first course, be four inches of brick and bed, and for other courses, it would be desirable to have bricks cast in a smaller mould; say, for the second course, three inches, for the third, two and three-quarter inches, and for the fourth, two and a half inches in breadth. This will give an opportunity of beveling the wall, and the bricks being all of the same thickness though of different widths, the external appearance will be everywhere the same.

WALLS, TO PREVENT DAMPNESS IN.—First dry the walls thoroughly, and then varnish them with the following: mix a pint of linseed oil, an ounce and a half of ground litharge, and two ounces of finely-powdered resin. Apply this in successive coats, which, after the fifth time, will form a varnish on the wall, so hard and compact as to effectually exclude moisture. Or, when the walls are papered, place under the paper sheet lead, rolled very thin, and fastened up with copper nails. It may be immediately covered with paper.

WALNUT, CULTURE OF.—They succeed only in a deep, alluvial, rich soil; their roots spread far and deep, and as most vegetation refuses to grow beneath their shade, the most proper position for them is the outside of the orchard, or corner of a field; their habit unsuits them for the garden. The necessity of gathering the fruit by thrashing it from the tree with poles, renders any further pruning unnecessary; and the management of mature trees may be said to be confined to the removal of decaying limbs, nor is that of younger plants of much more trouble; after being grafted, which should be done in March, in the manner usual with other trees of the class, they will only require to be trained to the height sufficient to obtain the desired stem before the head is allowed to be formed. The list of kinds cultivated by name is, as before mentioned, very limited; from them we select the following: *Fulham*—Nuts large, very full and double, shell thick; a good bearer. *Highbury*—Nuts of medium size, well filled, shell very thin, so that it may be broken between the fingers. *Prolific*—Nuts large, well filled; tree bears very young. *Thin-shelled*—Nuts double, full, shell thin; a moderate bearer. *Yorkshire*—Nuts well filled, but do not double, shell stout; bears well.

WALNUT KETCH UP.—See KETCHUP.

WALNUT VINEGAR.—Put green walnut shells into a brine of salt and water strong enough to float an egg; let them lie covered in this ten or twelve days; then take them out, and lay them in the sun for a week; put them into a pan and pour boil-

ing vinegar on them; in about a week or ten days pour off the vinegar, making it boiling hot, and pour over them again. In a month it will be fit for use, and will be found excellent to eat with cold meat, and particularly useful in making sauces.

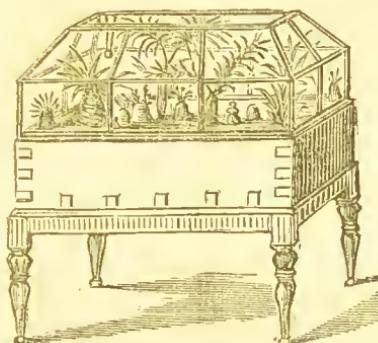
WALNUTS, TO PICKLE.—The walnuts for this pickle, must be gathered while a pin can pierce them easily, for when once the shell can be felt, they have ceased to be in a proper state for it. Make sufficient brine to cover them well, with six ounces of salt to the quart of water; take off the scum, which will rise to the surface as the salt dissolves, throw in the walnuts, and stir them night and morning; change the brine every three days, and if they are wanted for immediate eating, leave them in it for twelve days, otherwise, drain them from it in nine, spread them on dishes, and let them remain exposed to the air until they become black; this will be in twelve hours or less. Make a pickle for them, with something more than half a gallon of vinegar to the hundred, a teaspoonful of salt, two ounces of black pepper, three of bruised ginger, a drachm of mace, and from a quarter to half an ounce of cloves (of which some may be stuck into three or four small onions), and four ounces of mustard-seed. Boil the whole of these together for about five minutes; have the walnuts ready in a stone jar or jars, and pour it on them as it is taken from the fire. When the pickle is quite cold, cover the jar securely, and store it in a dry place. Keep the walnuts always well covered with vinegar, and boil that which is added to them.

WALTZ.—This kind of dance includes the following:—*Waltz Cotillon*: Places taken the same as for a quadrille; first couple waltz round inside, first and second ladies advance twice and cross over, turning twice; first and second gentlemen do the same; third and fourth couples do the same; first and second couples waltz to places, third and fourth do the same; all waltz to partners and turn half round with both hands meeting the next lady, perform this figure until in your places; form two sidelines, all advance twice and cross over, turning twice: the same, returning; all waltz round; the whole repeated four times. *Waltz Cellarius*: The gentleman takes the lady's left hand with his right, moving one bar to the left by glissade, and hopping twice on the left foot, while the lady does the same to the right, on her right foot; at the second bar, both repeat this movement with the other foot. This is repeated for sixteen bars; they then waltz sixteen bars, glissade and two hops, taking care to occupy the time of two bars, to get quite round. The gentleman now takes both the lady's hands, and makes the grand square, moving three bars to his left, at the fourth bar making two beats while turning the angle; his right foot is now moved forward to the other angle three bars, at the fourth beat again while turning the angle, the same repeated for sixteen bars, the lady having her right foot forward when the gentleman has his left foot forward, the waltz is again repeated, after which several other steps are introduced,

but which require to be seen to be understood. *Circular Waltz*: The dancers form a circle, then promenade during the introduction; all waltz sixteen bars—set, holding partner's right hand, and turn—waltz thirty-two bars, rest and turn partners slowly—face partner and chasséz to right and left—pirouette lady twice with the right hand—all waltz sixteen bars, set, and turn—all form a circle, still retaining the lady by the right hand, and move round to the left, sixteen bars: wallz for finale. *Polka Waltz*: The couples take hold of hands as in the usual waltz. First waltz: the gentleman hops the left foot well forward, then back; and glissades half round. He then hops the right foot forward and back, and glissades the other half round. The lady performs the same steps, beginning with the right foot. Second: the gentleman hopping strikes the left heel three times against the right heel, and then jumps half round on the left foot; he then strikes the right heel three times against the left, and jumps on the right foot, completing the circle. The lady does the same steps with reverse feet. Third: the gentleman raises up the left foot, places it lightly on the ground, then strikes the right heel smartly twice, and glissades half round. The same is then done with the other foot. The lady begins with the right foot. *Waltz à deux temps*: This waltz contains like the common waltz, three times, but differently divided, the first time consists of a gliding step; the second a chasséz, including two times in one. A chasséz is performed by bringing one leg near the other, and moving it forward, backward, right, left, and round. The gentleman begins by sliding to the left with his left foot, then performing a chasséz towards the left with his right foot without turning at all during the first two times; he then slides backwards with his right leg turning half round, after which he puts his left leg behind, to perform a chasséz forward, turning then half round for the second time. The lady waltzes in the same manner, except that the first time she slides to the right with the right foot, and also performs the chasséz on the right, and continues the same as the gentleman, except that she slides backward with her right foot, when the gentleman slides with his left foot to the left. To perform this waltz gracefully, care must be taken to avoid jumping, the movement consisting of a mere slide, and the knees being kept slightly bent.

WARDIAN CASE.—An invention which facilitates and favours the growth of plants where, owing to the vitiated state of the air in crowded towns, or close apartments, it is impossible to cultivate plants in open pots. The Wardian case may be constructed of every shape and size, according to the taste or means of the grower. By aid of glass, any one inhabiting a dwelling freely exposed to the sun's light, has it in his power to cultivate a miscellaneous collection of plants at a very trifling expense. One of these cases, of a very complete structure, is represented with its collection of plants, in the annexed figure. On the stand, or table is a strong box, lined with zinc or

lead, and filled with well-moistened loamy soil, underlaid by a thin subsoil of turf



loam, and this rests on a porous stratum of gravel or broken eartheeware. This composition is intended to represent a natural fertile soil, which it does to perfection, the water lodging among the gravel, all the wants of the plant in the superior mould require it. Over this box is placed a close-fitting glass cover, which completes the apparatus. The lighter and thinner the glass frame, and the finer the glass, the better are the plants exposed to view, and the more ready to receive the sun's light. When the moisture of the soil within is vaporized by the heat of the sun, it collects on the inside of the glass, and trickles down again, so that the plants are never subjected to irregular or capricious watering, while their own respiration and decomposition of water afford them nearly all the atmosphere they require. The case, however, is not absolutely air-tight; if it preserves a certain regular amount of moisture, warmth, and air, while it excludes dust, smoke, soot, and noxious fumes, it does all that is required. Wardian cases may be used either for in-door or open culture; and answer as well for a little front garden-plot, or back court, as for a drawing-room. They can be also conveniently put up in balconies, or even over the entire window, so that the panes may serve for one side of the conservatory. The plants to be sought after need not be rare exotics, but such as grow abundantly in woods, and in the neighbourhood of towns and cities. Of these, the common ivy grows most beautifully, and can be trained over any part of the case, agreeably to the pleasure of the owner. The primroses in early spring, will continue to flower for seven or eight weeks in succession; so likewise does the wood sorrel, the anemone, the honeysuckle, and numerous other plants, independently of numerous species of mosses and ferns. There are, likewise, many cultivated plants procurable at a small cost, which grow without the slightest trouble, as the common musk-plant, myrtle, jasmines, &c. All the vacant spaces in the case may be employed in raising small

salads, radishes, &c. These remarks apply chiefly to situations where there is but little sunshine; where there is more sun, a greater number and variety of flowering plants will be found to thrive, such as several kinds of roses, passion flowers, geraniums, &c., with numerous beautiful annuals. Case-grown plants, after the first preparation, require little or no care; the case need only be opened for the removal of dead leaves, or for a little trimming when required. Plants in open flower-pots are exposed to the alternations of climate, but the plants in these cases seem to be independent of any change of temperature in the air, and water themselves.—See WINDOW GARDENING.

WARDROBE.—An article of furniture in which clothes are kept. For this purpose, it is more convenient than chests of drawers, for in them, dresses and coats may

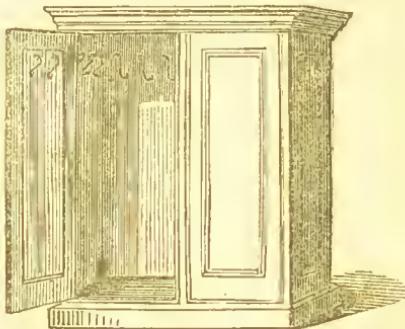


Fig. 1.

be put away without folding; or light and delicate articles may be laid by themselves on sliding trays, and so kept from all pressure. The simplest kind of wardrobe is an upright press, as shown in fig. 1. It may be made of mahogany, oak, or walnut; they

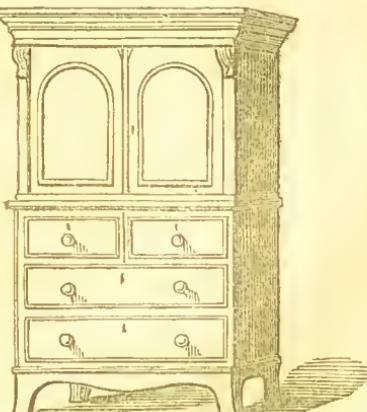


Fig. 2.

are also made of pine and painted, to suit

purchasers who cannot afford to pay a high price. In the engraving, one of the doors of the wardrobe is left open, to show the position of the pegs on which clothing is hung, by having a row on the inside of the door, the whole four sides will be filled, and no space wasted. A partition which divides the wardrobe into two, runs from top to bottom, where the doors meet, and the space covered by the closed door is generally fitted with sliding trays or drawers. The lowest drawer of all is a very deep one for holding bonnets. Sometimes pegs are placed inside, so that the bonnets may hang apart from each other. Fig. 2, combines the advantages of a wardrobe and chest of drawers; it is suitable for a small room, and will stand conveniently in a recess. When the doors are opened, the whole contents of the upper part are exposed at one view. This part is generally fitted up with five sliding shelves, or with sliding trays, which run in grooves made in the end of the carcass. Fig. 3 is what is called a winged wardrobe, and is the

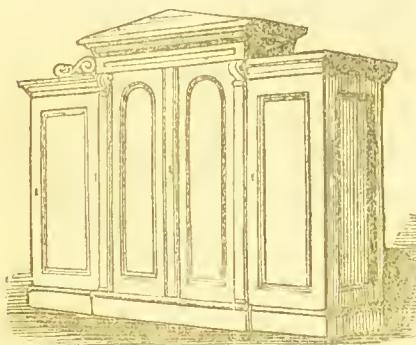


Fig. 3.

most serviceable of all, but it can only appear to advantage or be used with comfort in a large room. One convenience of a wardrobe over a chest of drawers is, that one lock on the door secures the things inside as well as the five or six locks on the drawers, and with far less trouble.

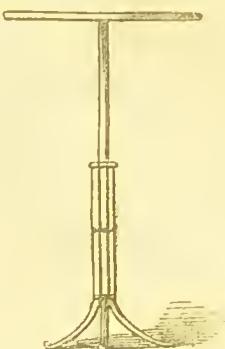
WARMING-PAN. — This well-known implement of domestic economy is usually filled with live coals when it is required for use, but care is needed not to leave smoke or suffocating fumes, independently of the



danger of scorching the sheets. A superior warming-pan illustrated by the annexed figure, obviates these inconveniences by being filled with boiling water instead of coal.

WARMING STANDARD. — A contrivance adapted for certain culinary processes, constructed as follows:—Procure a hollow

iron tube, of three-quarters or half an inch outside diameter; to the lower part, weld or solder a tripod, on which it may rest firmly; near the upper part provide a thumb-pinching screw-blite in the inside of



the tube. Procure a long rod of a diameter to go easily into the diameter of the lower tube; let this rod be of sufficient length to reach the second bar of the grate, where the lower end inserted in the tube is just caught by the pinching-screw. At the top of the bar or rod, fasten a circular plate of iron, on which to place the plates or articles to be warmed. It is evident that the pinching-screw, fastening the infernal rod, will keep the circular plate at any elevation requisite; thus, it may be kept opposite the hottest and brightest portion of the fire. The whole article may be made cheaply of tin.

WARRANTY. — In all cases of express warranty, if the warranty prove false, or the goods are in any respect different from what the vendor represents them to be, the buyer is entitled to compensation, or he may return them. But a general warranty does not extend to guard against defects which are obvious to ordinary circumspection, or where the false representation of the vendor is known to the vendee. Neither does the law, upon the sale of goods by sample, with a warranty that the bulk of the commodity answers the sample, raise an implied warranty that the commodity should be marketable; therefore, if there should be a latent defect then existing in them, unknown to the seller, and without fraud on his part, he is not answerable. But a sale of goods by sample, is such a warranty that, if the bulk be inferior to the sample, the purchaser is not bound to accept or pay for the goods. Warranty must be upon the sale; if it be made afterwards, it must be reduced to writing, otherwise it will not be binding on the vendor. With respect to the sale of horses, a warranty of soundness may be defined in an enlarged sense, an assurance from constitutional defects; but in its practical import is construed so as to exclude every defect by which the animal is rendered less fit for present use and enjoyment; the horse is not, on that account, to be held unsound, still less if the purchaser be informed of it, and admits the exception.

into the terms of the contract. The agreement for the sale of horses has been held to be an agreement "relating to the sale of goods," within the Statute of Frauds; therefore, a written receipt for the price, containing the warranty or other condition of sale, is admissible in evidence, stamped with a common receipt stamp, without an agreement stamp, and is the usual mode in which the contract is made and proved. A verbal representation of the seller to a buyer of a horse in the course of dealing, that he "may depend upon it the horse is perfectly quiet and free from vice," is a warrauty; or that he "could warrant." If the seller says, at the time of the sale, "I never wa[nt]t[ed] it, but the horse is sound as far as I know," this is a qualified warranty, and the purchaser may maintain an action, if he can show that the horse was unsound to the knowledge of the seller.

WARREN.—A place privileged either by prescription or grant from the Crown, to keep beasts and fowls of warren in, as rabbits, hares, partridges, pheasants, &c. The statute declares that a warren may be open, and there is no need of closing it in, as there is in the case of a park. In the forming of a warren, great caution is to be used for the fixing upon a proper place and a right situation. It should always be upon a slight ascent, if possible, and exposed to the east or the south. The soil that is most suitable is that which is sandy; for when the soil is clayey or hard, the rabbits find great difficulty in making their burrows, and never do it so well; and if the soil be boggy or marshy, there would be very little advantage from the warren, for wet is very destructive to these animals.

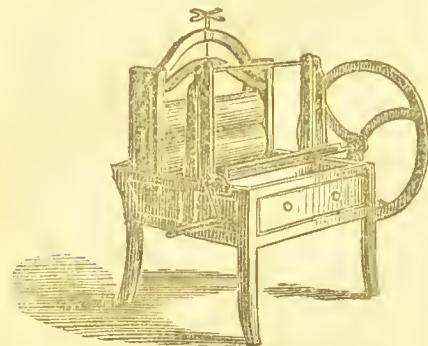
WASH BALLS.—Shave thin two pounds of new white soap into about a teacupful of rose-water; then pour as much boiling water on as will soften it. Put into a brass pan a pint of sweet oil, four pennyworth of oil of almonds, half a pound of spermaceit, and set all over the fire till dissolved, then add the soap, and half an ounce of camphor that has first been reduced to powder by rubbing it in a mortar with a few drops of spirit of wine or lavender water, or any other scent. Boil ten minutes, then pour it into a basin, and stir it till it is quite thick enough to roll up into hard balls, which must then be done as soon as possible. If essence is used, stir it in quickly after it is taken off the fire, that the odour may not evaporate.

WASHING.—The process of washing is one of the most important in the practice of domestic economy, and requires considerable management to conduct it properly. Before proceeding to wash, all the articles must be carefully looked over and sorted, taking care to tie the pairs together. Articles much torn should be mended, as a rent begun before the wash is sure to be increased by scrubbing. All stains should be attended to, using the proper application for each kind. The house-linen, body-linen, coloured articles, and flannels, are all washed separately, and must, therefore, be sorted

accordingly. When this is done, the operation may be proceeded with as follows:—Take a pound of yellow soap and three ounces of patent washing-powder, dissolve in two quarts of water, and boil to a jelly. Add this quantity to twelve gallons of cold water in the furnace, then put the finest of the clothes into the water while cold, heat the furnace, and allow them to remain till they have boiled for half an hour. Take them out, and rinse them twice, in two clear waters. In taking them out of the furnace, lay them in the narrow-bottomed basket over the furnace, that the water may drain back into it before putting them into clear water. After rinsing them the first time, pour the water back into the furnace to boil the second lot of clothes in, and let the second water be used for the first rinsing of the next lot of clothes, and so on, bluing each lot after being rinsed twice. When the water in the furnace becomes too weak, add three-quarters of a pound of soap and an ounce of washing-powder, boiled to a jelly, as before. If the wristbands, or any part of the clothes, are very dirty, rub a little soap on, and soak them one or two days beforehand. They must be carefully looked over when in the first rinsing tub, and any dirty places washed out and rinsed again. If the furnace is small, a less quantity of soap and soda must be used. This plan requires a plentiful supply of water. When there are many coloured things, dissolve half a pound of soap into the water to make a lather, instead of rubbing soap on them. And to wash flannels, make a good lather with yellow soap and warm rain water; rub them, and put very little soap upon them. Wash them in this way in two waters, and then in a clear lather with a little blue in it; squeeze them in a cloth, and shake them well. When water is hard, and will not readily unite with the soap, it will always be proper to boil it before use; which will be found sufficiently efficacious, if the hardness depends solely upon the impregnation of lime. Even exposure to the atmosphere will produce a softening effect, leaving it much fitter for washing purposes. In both cases, the water ought to be carefully poured off from the sediment, as the neutralized lime, when freed from its extra carbonic acid, falls to the bottom by its own gravity. Boiling, however, has no effect when the hardness of the water proceeds from lime united with the sulphuric acid; and it must be brought to its proper state, by the application of common wood-ashes from the kitchen grate, or of barilla, or pearlash. To economise the use of soap, put any quantity of pearlash into a large jar, covered from the dust; in a few days, the alkali will become liquid, which must be diluted in double its quantity of soft water, and with an equal quantity of newly-slacked lime. Boil it for half an hour, frequently stirring it, adding as much more hot water, and drawing off the liquor, when the residuum may be boiled afresh, and drained, until it ceases to feel acid to the tongue. Soap and labour may be saved by dissolving

alum and chalk in bran-water, in which the linen ought to be boiled, then well rinsed out, and exposed to the usual process of bleaching.

WASHING MACHINE. — A machine designed for washing articles, with a saving of labour and expense. There are various constructions of this kind in existence; that shown in the annexed engraving may



be explained as follows:—It is furnished with a wash-tub, and a tap to draw off water; also with rollers for wringing and mangleing, and a drip-board to convey water from the rollers back into the tub, without spilling the water. There is a mangle board, which slides out, a fall down table, with inclined back, and wheels by which the whole can be removed by the merest child. The washing-tub is fitted with internal ribs, and represents an oblong box, with a watertight lid. The action is semi-rotary, causing the clothes to rub backwards and forwards over the ribbed sides of the tub, which is a perfect imitation of the hand-rubbing mode of washing, and which causes the least amount of friction. In this machine, therefore, the finest muslin can be washed without the slightest injury. Its great advantage, however, is that it excludes atmospheric air, and confines the steam, during the operation of washing, the steam acting more powerfully upon the clothes, as it bleaches them more effectually than though they were boiled. The dirt, under these circumstances, is more effectually loosened, and less friction is required to free it from the article washed. The wringing powers of this machine are also excellent. The clothes are much better in colour when wrung by this process, than by the hand, the dirty water being completely pressed out of them; while, by the ordinary mode, it is left to dry in the clothes. Another advantage of this machine is, that it occupies very little space, and may be easily worked.

WASHING THE BODY. — Although many persons may not find it convenient to use a bath, every one is in a position to keep the skin sweet and healthy by washing. It is highly conducive, not only to bodily health, but to mental vigour and cheerful-

ness, to submit the whole of the body to an ablution daily. Immediately a person leaves his bed in the morning, he should sponge himself thoroughly with cold water, afterwards drying well, and using vigorous friction for some time. This will ensure a healthy action of the skin, and prevent numerous diseases which arise from the neglect of this wholesome habit. If a person be at all delicate, or the weather be very severe, the water may be made lukewarm. In the case of invalids, where it is desirable to cleanse the body, but dangerous to expose it too much, a little vinegar and water, slightly warm, will be found a very refreshing application. There exists a ~~great~~ prejudice with some people against ~~washing~~ the feet and head, under the impression that doing so renders a person liable to colds, whereas it is just the reverse; for the habitual washing of these parts of the body will render a person almost free from these afflictions.—See ABLUTION, BATHING, SKIN, &c.

WASH-LEATHER GLOVES, TO CLEAN. — These should first have the grease spots taken from them, by rubbing on them either magnesia or cream of tartar; then make a lather of white soap and lukewarm water, wash and wring the gloves through this, and then squeeze them through a second suds. Rinse them first in lukewarm water, and then in cold, and stretch them to dry before the fire, or in the sun.

WASHSTAND. — For the proper furnishing of a bedroom, it is necessary to be careful in the choice of washstands. The variety of these articles of furniture is so great, that whatever be the style of room to be fitted up, there can be little or no difficulty in selecting the right kind. For small or common rooms, the smallest and simplest kind of washstand will be the best; one of these is shewn at *fig. 1*. It occupies but little

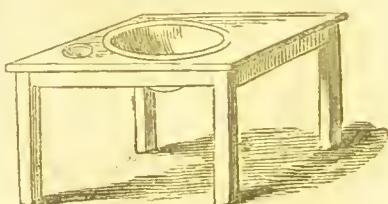


Fig. 1.

space, being, in fact, scarcely wider across than the basin, about fifteen inches square; and, if required, it may be still further reduced by being made triangular, so that it will adapt itself to a corner. By placing the shelf on which the pitcher stands lower, room would be gained for an additional one, with a drawer between the two; the top may be also enclosed with washboards, as *fig. 2*. *Fig. 2* represents a washstand superior in style and appearance to the foregoing, and affording more room for the soap and brush, trays, washbottle, &c.,

which are generally placed upon it. The length should be from two to three feet, according to the capacity of the bedroom. Three feet will be found the most convenient length if there be space enough in the apartment; or if there be room enough for a double washstand, then four feet or four

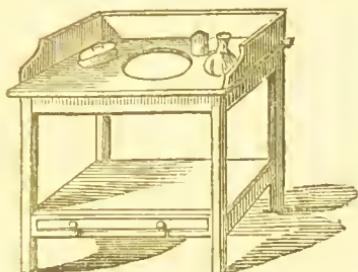


Fig. 2.

feet and a half will not be too long. On a small stand, the washboards should be from three to four inches deep, and increased in proportion to the size to six or seven inches for a three feet stand, and ten or twelve inches for a double stand; in the latter case, a shelf, four inches wide, and the whole length of the stand, is usually fixed to the back washboard, about four inches below its upper edge. The diameter of the basin-hole should be from nine inches to ten inches and a half, as it is most convenient for lifting the basin in and out, and better than fitting closely. Fig. 3 shows a pedestal

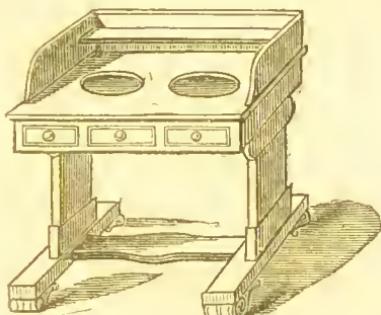


Fig. 3.

washstand, the appearance of which, when well finished, is very handsome, and is preferred by many persons to one having legs. The best kinds are made of mahogany, with a marble top; but the painted and commoner sort are much used, and cost much less. The colour of the paint or japan depends much on taste; the most frequent is drab and green, or drab and blue, with imitation marble top. In addition to the paint, it is not a bad plan to cover the top with a piece of light marbled floor-cloth,

which looks well, and lasts a long time, with care. Fig. 4 represents the upper part of an enclosed washstand, which, in some cases, is more suitable than one of the ordinary make. The hollow lids conceal the basin, and the jug and other vessels are kept in the receptacle below; the whole may be shut out of sight; the stand may, consequently, be placed in a sitting-room, if required, or in a bedroom much used in the day-time. Washstands should not be made more than twenty-eight inches high, or they will be inconvenient to those who stoop to wash their face over the basin. This is a matter which should be carefully considered in buying a washstand, as many persons do not discover the inconvenience until too late. For a married couple, a double washstand

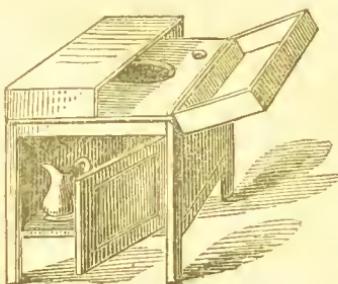


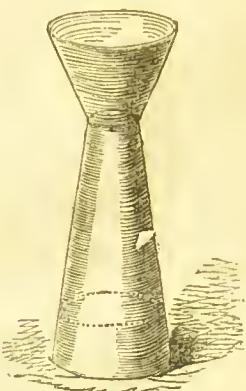
Fig. 4.

is obviously much more convenient than a single one, as it obviates the necessity of waiting, emptying the basin, &c. In washing, some of the water used is necessarily spilt upon the washstand, and, when this is in considerable quantities, it is apt to rot the wood, unless it be dried immediately. The paperhanging in the immediate vicinity of the washstand, is also liable to be soiled by the soap and water; and to avoid this, a piece of paper should be pinned against the wall during the process of ablution.

WASP STINGS, TO HEAL.—It is a fact worth knowing, that at the season of the year when wasps are troublesome with their stings, no application will afford such instantaneuous relief as a drop of liquor potassæ—potash-water; indeed, its effects are so unfailling, that it may be called a specific cure. It operates by neutralizing the injected poison, which is undoubtedly of an acrid nature. Families and persons who have the care of children, will do well to have always at hand a small quantity of this solution, which should be kept in a stoppered phial. It is not an expensive application; a quarter of an ounce will be quite sufficient to order at once, and a single drop placed on the wound (which should be first slightly opened) is all that is required.

WASP TRAP.—A glass, shaped similarly to that seen in the engraving, forms an excellent trap for this troublesome insect. These glasses are to be about half-filled with

sugar and water, or honey and water, with a little of the mixture placed at the mouth,



to entice the wasp to enter. Once in, there is, of course, no extrication.

WATCH, MANAGEMENT OF.—1. Wind your watch as nearly as possible at the same hour every day. 2. Be careful that the key is in good condition, as there is much danger of injuring the works when the key is worn or cracked: there are more main springs and chains broken through a jerk in winding than from any other cause, which injury will sooner or later be the result, if the key be in bad order. 3. As all metals contract by cold and expand by heat, it must be manifest that to keep the watch as nearly as possible at one temperature, is a necessary piece of attention. 4. Keep the watch as constantly as possible in one position, that is, if it hangs by day, let it hang by night, against something soft. 5. The hands of a pocket chronometer or duplex watch should never be set backwards; in other watches, this is a matter of no consequence. 6. The glass should never be opened in watches which set and regulate at the back. One or two directions more it is of vital importance that you bear in mind. On regulating a watch, should it be fast, move the regulator a trifle towards the slow; and if going slow, do the reverse; you cannot move the regulator too slightly or too gently at a time, and the only inconvenience that can arise is more than once. On the contrary, if you move the regulator too much at a time, you will be as far, if not farther than ever, from attaining your object, so that you may repeat the movement until quite tired and disappointed, stoutly blaming both watch and watchmaker, while the fault is entirely your own. Again, you cannot be too careful in respect of the nature and condition of your watch-pocket; see that it be made of something soft and pliant, such as wash-leather, which is the best, and also that there be no glue or nap that may be torn off when taking the watch out of the pocket. Cleanness, too, is as useful here as in the

key before winding; for, if there be dust or dirt in either instance, it will, you may rely upon it, work its way into the watch, as well as wear away the engine-turning of the case.

WATER BISCUITS.—Into one pound of flour rub three ounces of butter, add a sufficient quantity of water to make it into a stiff dough; well knead it, and roll it as thin as wafers; prick with a biscuit-pricker, and bake a very pale brown.

WATER-COLOUR DRAWINGS, TO VARNISH.—Boil some clean parchment-cuttings in water, in a clean glazed pipkin, till a very clear size is produced; strain it, and keep it for use. Give the drawings two coats of this mixture, passing quickly over the work, so as not to disturb the colours; when dry, proceed as previously directed for varnishing.

WATERCRESS, CULTURE OF.—This excellent salad plant is extensively cultivated in the counties bordering on the metropolis, for the supply of the London markets. It may be had wherever there is a moderate but continual stream of clear water. In Kent, where the finest are produced, the beds are formed by widening the natural stream to an extent that will secure a depth of about three inches, to be regulated by dams placed at intervals across the stream; the bottom is covered with chalk or gravel, and the plants placed in rows parallel with the course of the stream. When it is desired to gather a bed, as the spaces between the dams are called, and which is done successively from the head of the stream downwards, the upper dam is secured, and the lower one opened, the water is thus drained off, and the cress is gathered. It is also necessary to lay them dry several times in the season, to clear the plants of weeds, and to make good, deficiencies that may have occurred; after receiving the requisite attention, the water is again admitted, and the plants begin to grow again. In this way they are gathered almost throughout the year; and, in order to afford protection from the severest weather, coppice-wood is grown on the banks of the stream, which breaks the cutting wind in winter, and the fierce sunshine of summer. The watercress may be grown in still water that can be occasionally changed by sluices, but they are inferior to those from constantly running water.

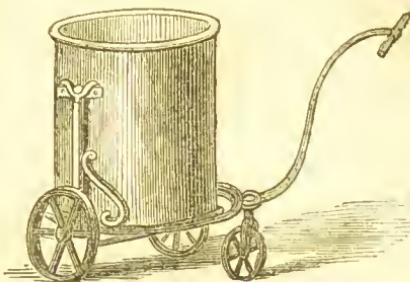
WATERCRESS STEWED.—The following receipt will be found to produce an agreeable and wholesome dish. Lay the cress in strong salt and water, to clear it from insects; pick and wash nicely, and stew in water for about ten minutes; drain, and chop; season with pepper and salt; add a little butter, and return it to the stewpan until well heated. Add a little vinegar just before serving; put around it sippets of toast or fried bread. The above, made thin, as a substitute for parsley and butter, will be found an excellent covering for a boiled fowl. There should be considerably more of the cress than the parsley, as the flavour is much milder.

WATER, DIETETIC PROPERTIES OF.—Water is an inestimable benefit to health, and as it neither stimulates the appetite to excess, nor can produce any perceptible effect on the nerves, it is admirably adapted for diet, and we ought, perhaps by right, to make it our sole beverage, as it was with the first of mankind, and still is with all animals. Pure water, flavours the food we eat better than any other liquid, and more certainly preserves the juices in their natural purity; it penetrates more easily through the smallest vessels, and removes obstructions in them. Water is to be recommended as an ordinary beverage on two conditions. The *first* is, that it should be drunk as pure as possible. Impure water is of itself impregnated with foreign matters, which may prove prejudicial to health. Hence it loses all the advantages it possesses in its pure state, and in such a case it would be preferable to drink beer or any other beverage, that is saturated with nutritive particles, rather than impure water. The signs of good water are, that it easily becomes hot and cold, that in summer it is cool, and in winter slightly lukewarm; that a drop dried on a clean cloth leaves not the slightest stain behind; and that it has neither taste nor smell. It is also a sign of good water, that when boiled, it becomes hot, and afterwards grows cold, and sooner than any other water. The water of standing pools and wells is in general extremely impure, and is accounted the worst of all. River-water differs according to the variety of the soil over which it runs, and the changes of the weather; but, though commonly drunk, it is never pure. Next to well and river-water, both of which are always impure, rain-water follows in the scale of preference. It is very impure, and a ready vehicle for all the pernicious matters that are constantly floating in the atmosphere. Snow-water is much purer. The water to be most strongly recommended is a spring-water which descends from lofty hills, through flints and pure sand, and rolls gently along over a similar bed of rocks. Such water leaves behind all its coarse impurities in the sand; it is a purified rain and snow-water, a fluid crystal, a real cordial, and the best beverage for persons in good health. The *second* condition attached to water-drinking is, that such persons only choose it for their constant beverage, to whom warming, strengthening, and nutritive liquids are hurtful; and that, if they have not been in the habit of drinking it from their youth, they use some caution in accustoming themselves to it. Those who have been in the habit of drinking water from their youth, cannot choose a more wholesome beverage, if the water be pure.

WATER, HARD, TO SOFTEN.—Half-fill a tub or barrel with wood ashes, and then fill it up with water; by this means, ley may be obtained whenever it is wanted. A gallon of this ley, put into a large kettle of hard water, will make it as soft as rain-water.

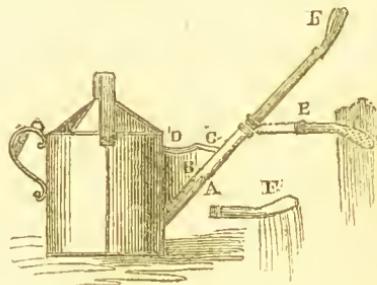
WATERING BARROW.—This imple-

ment is intended for large establishments where much watering is ordinarily done by



the watering-pot. By its use, much time and labour of the gardener are saved, particularly where the tank, pond, or pump is at a distance from the garden.

WATERING POT.—The essential operation of watering plants is considerably facilitated by the employment of a well-contrived watering pot. The one represented in the annexed figure has the spout



made in three distinct parts. The first, A, is fixed to the body of the pot in such a manner as not to become easily out of repair. This is effected by filling up the angle between the spout and the pot by the hollow compartment, B, in the top of which are two openings, C and D; the larger, C, for holding, when not in use, the middle piece of the spout, or larger rose; and the other, D, for the smaller rose. The larger rose, E, is for using without the middle piece of the spout, and it delivers the water upwards; the smaller rose, F, which can only be used with the middle tube of the spout, delivers the water downwards, exactly over the object or space to be watered. The advantage of this rose, therefore, consists in the definiteness of its action, as the advantage of the larger rose consists in the gentleness of its action. An additional value is given to this part by the screw-joints, which render the spout perfectly water-tight; and therefore, among other uses, it is particularly suitable for lady gardeners.

WATER ON THE BRAIN.—Hydrocephalus, or dropsy of the brain, is a disease more generally found in infancy and very

early youth than at any other period, and is usually divided into *acute* and *chronic*, and external and internal, or a collection of fluid between the membranes of the brain, or in the ventricles or cavities of the brain itself. This disease is almost always found existing in a scrofulous state of the system; and is either born with the child in a greater or less degree of development, or produced subsequent to birth, either commencing immediately, or concurrent with the irritation of teething; sometimes it is later in its attacks, and depends upon some special irritation, as of worms in the stomach and bowels, when the enlargement goes on with remarkable rapidity. The size to which the bones of the skull may be parted, and the dimensions the head sometimes assumes are, in many instances, extremely remarkable; the head, from its great size, being obliged to be supported on pillows, and lifted with the child. The most obvious symptoms indicating this disease, before the size of the head declares the nature of the mischief, are, pains over the eyes and forehead, heaviness and stupor, dilation of the pupils, nausea, vomiting, great debility and slowness of the pulse, and very often convulsions. In acute hydrocephalus, the disease commences with inflammation of the membranes of the brain, and terminates by an effusion of serum into the ventricles, or between the coats of the organ, and is usually fatal in a few days; but by far the most ordinary form is that of the chronic state, which may occur at any time between birth and eight years of age, and very seldom after that period. This form of the disease is characterised by the following special symptoms: drowsiness, languor, squinting, vomiting, confined state of the bowels, coma, and lastly convulsions. The bones of the skull separate, the natural openings, or separations existing in infancy, enlarge, and the whole head becomes considerably expanded. The acute hydrocephalus is generally excited by some irritating cause in the bowels, and is first indicated by languor, loss of appetite, vomiting, and a dry parched tongue, succeeded by a hot dry skin, flushings of the face, pain over the eyes, extreme sensibility to light, redness of the eyes, and contracted pupils. The pain on the brows and forehead becomes extremely acute, and comes on at intervals in fits of intolerable pain, causing the patient to shriek out, and compress the head with the hands. In a short time the pupils cease to contract, and become enlarged, the dilation gradually increasing till at length the iris becomes insensible to the influence of light, and will neither contract nor dilate; a permanent squint of one or both eyes sets in, the pain in the head gives way to a state of drowsiness and coma, and the pulse, from being quick and small, falls to a faint, almost imperceptible, beat or flutter, till loss of sight, and a universal lethargy, terminates the case. In the treatment of acute hydrocephalus, or water in the head, there are two indications or courses to be pursued, to reduce the inflam-

matory action, and promote absorption of the effused fluid. The first is to be effected by bleeding, blisters, cathartics, and other similar means; and the second, by mercenial applications, diuretics, and tonics. The treatment of the chronic form consists in a modification of both these means; but as this disease, in either form, can only be undertaken by a professional person, and must be watched by an experienced eye, and as the different phases of both forms demand a practised judgment in knowing when and how to meet the various symptoms, it is unnecessary here to give modes of procedure for so serious a disease.—See DROPSY, TEETHING, &c.

WATER-PIPES, TO PREVENT FREEZING.—The tying up of the hall-tap with straw or flannel during severe weather, will, in general, prevent the freezing of water-pipes. But the surest method is to have the main-pipe higher than the cistern or other receptacle; and, being thus of a regular incline, the pipe will immediately be exhausted when the supply ceases. When water remains in the pipes, if each tap be left dripping, the circulation of the water will prevent it freezing in the pipes.

WATERPROOF BOOTS.—Boots may be made impervious to water by the following composition:—Melt three ounces of spermaceti in a pipkin, or other earthen vessel, over a slow fire; add six drachms of India-rubber, cut into slices, and let the whole remain till it dissolves; then add eight ounces of tallow, two ounces of lard, and four ounces of amber varnish. Incorporate these ingredients thoroughly, and the mixture will be then fit for use. The boots which require waterproofing must have two or three coats, with a common blacking-brush, and a fine polish is the result.

WATERPROOF CLOTHES.—Procure some weak size, such as is used by panermakers, make it hot, and stir into it a little piece of alum, and a small quantity of soap-lather. Apply this mixture with a brush equally all over the article. Or, melt an ounce of white wax, add to it a quart of spirits of turpentine, into which, when thoroughly mixed and cold, dip the cloth, and afterwards hang it to dry.

WATERPROOF LEATHER.—Boil a neat's foot in two quarts of linseed oil for two hours, then add six ounces of India-rubber, and let it boil till thoroughly dissolved. Apply this to the leather with a soft brush, a little at a time.

WATER SOUCHY.—This is a very simple and inexpensive dish, much served at the regular fish-dinners. It is excellent if well prepared; and as it may be made with fish of various kinds, when they are too small to present a good appearance, or to be palatably dressed in any other way, it is also very economical. Flounders, perch, tench, and eels are said to answer best for water souchy; but delicate soles, and several other varieties of small white fish, are often used for it with good effect. It is also often made with slices of salmon, or of salmon-trout, freed from the skin. Throw into rather more

than sufficient water to just cover the quantity of fish required, from half to three-quarters of an ounce of salt to the quart, a dozen corns of white pepper, a small bunch of green parsley, and two or three tender parsley roots, first cut into inch lengths, and then split to the size of straws. Simmer the mixture until these last are tender, which will be in from half to a whole hour, then lay in the fish delicately cleaned, cleared from every particle of brown skin, and divided into equal portions of about two inches in width. Take off all the scum as it rises, and stew the fish softly from eight to twelve minutes, watching it that it may not break from being over-done. Two minutes before it is dished, strew in a large tablespoonful or more of minced parsley, or some branches of the herb boiled very green in a separate saucepan; lift out the fish carefully with a slice, and the parsley roots with it; pour over it the liquor in which it has been boiled, but leave out the peppercorns. For a superior water souchy, take all the bones out of the fish, and stew down the inferior portions of it to a strong broth; about an hour will be sufficient for this. Salt, parsley, and a little cayenne may be added to it. Strain it off clear through a sieve, and use it instead of water for the souchy. The juice of half a good lemon may be thrown into the stew before it is served. A deep dish will, of course, be required for it. The parsley roots can be boiled apart when more convenient, but they give an agreeable flavour when added to the liquor at first. Slices of brown or white bread and butter must be sent to table always with water souchy; the first is usually preferred, but, to suit all tastes, some of each may be served with it.

WATER STAINS, TO REMOVE FROM CRAPE—When a drop of water falls on a black crape veil or collar, it leaves a conspicuous white mark. To obliterate this, spread the crape on a table (laying on it a large book or a paper-weight, to keep it steady), and place underneath the stain a piece of old black silk. With a large camel-hair brush, dipped in common ink, go over the stain, and then wipe off the ink with a little bit of old soft silk. It will dry immediately, and the white mark will be seen no more.

WATER, TO PURIFY.—Filter river-water through a sponge, more or less compressed, instead of stone or sand, by which the water is not only rendered more clear, but wholesome; for sand is insensibly dissolved by the water, so that, in four or five years, it will have lost a fifth part of its weight. Powder of charcoal should be added to the sponge, when the water is foul or fetid. Or, take a large flower-pot, and put either a piece of sponge or some cleanly-washed moss over the hole at the bottom. Fill the pot three-quarters full with a mixture of equal parts of clean sharp sand and charcoal, in pieces the size of peas; on this lay a piece of linen or woollen cloth, large enough to hang over the sides of the pot. Pour the water to be filtered into the basin

formed by the cloth, and it will come out pure through the sponge or moss at the bottom.

WAX, TO MELT AND PURIFY.—Where six or eight stocks of bees are kept, it will be most profitable and convenient to have a tin vessel made to fit a duly proportioned kettle or pot, the sides of which should be quite straight, so that, when it slides down, there may be no vacancy for the farina or bee-bread to rise up between. The holes in the tin division should be as numerous and small as possible in the bottom, and about two inches up the sides; the bottom should be quite flat, without a rim, like that of a quart tin pot, that it may press the dregs closer down when near the bottom. Set the pot on the fire, with about five or six inches depth of water therem, in which is to be mixed single aqua-fortis, in the proportion of half an ounce for each quart of water. In this put as many combs as will conveniently boil when melted. As soon as they begin to melt, they should be frequently stirred, until all be thoroughly melted; let it then boil without stirring, that the wax may rise clear. It should be made to boil briskly during the whole process. As soon as the yellow froth rises, put in the division, and press it down in the liquor, until it be about full; with a wooden spoo, or what is better, a tin ladle, first dipped in cold water, lightly skim off the wax as it rises upon the surface, and put it in a narrow-bottomed pan previously rinsed in cold water, set as near as may be to the pot on the fire; and continue skimming the wax off as long as it rises, depressing the separator in proportion as the liquor rises. When the liquor in the pan is nearly cold, the wax is to be taken out, and what dross adheres to it scraped off. The wax is then to be reboiled in a small quantity of water, and about a fourth part as much aqua-fortis as before to a quart; as soon as it boils, take it off, and let it stand until cold. The wax will concrete at the top, and the remaining dross, being scraped off, may be further purified with other combs. Another and less expensive method is, to put the combs loosely into a canvas, or rather a fine hair bag, tied up close at the end, and put into a kettle with a due proportion of aqua-fortis and water; a leaden or iron weight is to be laid on the bag, to keep it down to the bottom. It must be made to boil so as to throw up the froth briskly, which is to be taken off with a ladle; a thick board, with a handle in the middle, is then to be put in, to press out the wax that may be still adhering; it is afterwards to be remelted, as in the first method. It should be carefully observed, that in these processes of skimming off the froth, the rising of a clear yellow should be reserved by itself, as often requiring no further purification. The more forcibly the froth is thrown up, the purer it will be, and the operation the sooner finished. The very old brood combs are not worth melting; but such refuse as has been pressed, may be kept in a close tub or vessel for five or six weeks, in which time the impurities will

ferment and decay, and the wax will be in a better state for melting.

WAX. TO REMOVE.—Wax is removed by spirits of turpentine, using it on a piece of woollen cloth, and afterwards getting off the turpentine by continuing the friction with a clean piece of cloth, or, if necessary, follow it up by soap and water, or spirits of wine. When the wax is abundant in quantity, a hot iron should be held near the cloth till the wax melts, then scrape it off, lay a clean piece of blotting-paper over the place, and press it with a cooler iron till it has taken up as much as possible, after which proceed as above.

WAXEN FLOWERS AND FRUIT.—The modelling of flowers and fruit in wax is an easily acquired art, and one which is encouraging in its results. The materials for commencing the process will cost from twenty to thirty shillings; they may be obtained at most fancy repositories, and specimens of the latest improvements and novelties may be seen at the same time at these places. The petals, leaves, &c., of flowers are made of sheets of coloured wax, which may be purchased in packets of assorted shades. The stems are made of wire of suitable thickness, covered with silk, and overlaid with wax; and the leaves are frequently made by pressing thin sheets of wax on leaves of embossed calico. Leaves of various descriptions are to be obtained of the persons who sell the materials for wax-flower making. The flowers, leaves, and buds of artificial flowers will serve as the base of their wax models. The best guide to the construction of a flower is to take, say a tulip, a rose, or a camelia (procuring, if possible, two flowers nearly alike), and carefully picking one of them to pieces, lay the petals down in the order in which they are taken from the flower, that you may know their relative positions. The natural flower will be a guide in getting the wax petals together, and will enable the operator to give not only to each petal, but to the contour of the flower, the characteristics which are natural to it. In most cases, they are merely pressed together, and held in their places by the adhesiveness of the wax. From the paper patterns, the wax petals or other portions of the flowers, may be cut. They should be cut singly by scissors, rather loose at the points, and the scissors should be frequently dipped into water, to prevent the wax from adhering to the blades. The scraps of wax which fall from the cutting will be found useful for making seed vessels and other parts of flowers. Very few and very simple instruments are required, and those may be purchased at the places where the other materials are obtained. Where the manufactured formations of leaves cannot be obtained, patterns of them should be cut in paper, and the venous appearance may be imparted to the wax by pressing the leaf upon it. In the construction of sprigs, it is most important to be guided by sprigs of the natural plant, as various kinds of plants have many different characteristics in the grouping of their flowers, leaves, and

branches. For the tints, stripes, and spots of variegated flowers, colours will be supplied from amongst the other materials, and the application of them is precisely upon the principle of water-colour painting.

For the making of waxen fruit, the following instructions are to be observed:—The materials of which moulds are composed should be of the best plaster of Paris, which can be bought from the Italian figure-makers. If this cannot be procured, the cheaper plaster from the oil-shops may be substituted, if it can be procured quite fresh. The mould must be made by an impression from the object to be imitated, made upon the plaster before it sets; and, for early experiments, an egg, boiled hard, will be found efficient. Having filled a small pudding-basin about three-quarters full of fine damp sand, lay the egg lengthwise in the sand, so that it is above, and half below, the level of the sand, which should be perfectly smooth around it. Then prepare the plaster in another basin, which should be half full of water; sprinkle the plaster in quickly till it comes to the top of the water, and then, having stirred it for a moment with a spoon, pour the whole upon the egg in the other basin. While the half mould thus made is hardening thoroughly, carefully remove every particle of plaster from the basin in which it was mixed, and also from the spoon which has been used. This must be done by placing them both in water, and wiping them perfectly clean. This is highly important, since a small quantity of mortar which has set will destroy the quality of a second mixing. In about five minutes, the half mould will be fit to remove, which may be done by turning the basin up with the right hand (taking care not to lose the sand), so that the mould falls into the left hand; the egg should then be allowed to fall back gently on the sand out of the mould. The egg being removed and laid aside, the mould must be trimmed; that is, the sand must be brushed from the flat surface of the mould with a nail-brush, very slightly, without touching the extreme and sharp edges, where the hollow of the mould commences. Then upon the broad edge, from which the sand has been brushed, make four equidistant hollows, with the round end of a table-knife; these are to guide hereafter in the fixing of the second half of the mould. The egg should now be replaced in the mould, and the edge of the cast, with the holes, thoroughly moistened with sweet oil, laid on with a feather or camel-hair brush. Into the basin from which the sand has been emptied, place, with the egg uppermost, the half mould, which should fit closely at the edges to the side of the vessel, then prepare some more liquid plaster as before, and pour it upon the egg and the mould, and, while it is hardening, smooth it round with a spoon, as with the first half. In due time, remove the whole from the basin; the halves will be found readily separable, and the egg being removed, the mould is ready to cast in, after it has been set aside for an hour or two, so as to harden

completely. For the first experiment, common yellow wax may be used, or the ends of partially used wax or composite candlesticks. Every large object to be imitated in wax should be cast hollow; and therefore, although the transparent lightness required in the imitation of fruits is not requisite in an artificial egg, yet, in this instance, in order to render the instructions conformable with the principle, the egg will be cast as if it were fruit. The operator must now proceed as follows:—Soak the two pieces of plaster of Paris in hot water for ten minutes. In the mean time, melt the wax very slowly in a small tin saucepan with a spout to it, care being taken not to allow the wax to boil, or it will be discoloured; a lump of wax, the size of the object to be imitated, will be sufficient for casting twice at least. As soon as the wax is thoroughly melted, place the saucepan by the side of the fire, and, taking the parts of the mould from the hot water, remove the moisture from their surfaces by pressing them gently with a handkerchief or soft cloth. The mould must not be wiped, but only pressed. Having laid the two halves of the mould so that there can be no mistake in fitting the one in its exact place quickly on the other, pour from the saucepan into one of the half moulds nearly as much wax as will fill the hollow made by the model, quickly fit the other half on the top of it, squeeze the two pieces tightly together in the hand, and, continuing to hold them thus, turn them over in every possible position, so that the wax, which is slowly congealing in the internal hollow of the mould, may be of equal thickness in all parts. Having continued this process for at least two minutes, the hands (still holding and turning the mould) may be immersed in cold water, to hasten the cooling process. The perfect congealment of the wax may be known, after a little experience, by the absence of the sound of fluid on shaking the mould. As soon as the mould is completely cooled, the halves may be separated carefully, the upper half being lifted straight up from the under half, and if the operation has been properly conducted, a waxen egg will be turned out of the mould. The egg will only require trimming, that is, removing the ridge which marks the line at which the halves of the mould were joined, and polishing off the scratches or inequalities left by the knife with a piece of soft rag, moistened with spirits of turpentine or spirits of wine. It is always desirable, when the materials and moulds are prepared, to make several castings of the same object, as the moulds are apt to become chipped when laid by in a cupboard; and for this reason, as well as for the sake of practice, beginners are advised to make at least a dozen waxen eggs before any other object is proceeded with. If success attends these first efforts, every difficulty in subsequent operations will be easily overcome. To colour wax, stir into it, while it is by the side of the fire, a little flake white in powder, and continue to stir the mixture while it is being poured into the half mould.

The fixing and shaking of the moulds must be performed quickly, or the colouring matter will settle on the side of the half into which the mixture is poured. To produce a good imitation of the surface, in the first place, very slightly prick with a fine needle the surface of the object, and then, having smeared it with spirits of turpentine, rub the surface all over, so as nearly to obliterate the marks of the needle-point. The simple operation thus described constitutes the fundamental process of waxen fruit and flower making; and in the same manner as the egg is treated, oranges, lemons, large gooseberries, small cucumbers, &c., &c., may be operated upon.

WAYS AND MEANS.—This well-known term is specially applied to the receipt and expenditure of national income, but it may be equally brought to bear on private resources and outlay also. In the first place, it is necessary to determine what sum may be spent, as well as the total expenditure which may be safely and properly incurred. When it is definitely settled, the next thing is to curtail the expenses of each department to an amount proportioned to the total expenditure, and here scope is afforded for considerable variation according to the extent of the establishment. Generally speaking, about one-half of a moderate income must be set apart for the supplies of the house, the other moiety to be devoted as follows:—one-eighth of the whole to rent and taxes, one-eighth to clothing, one-eighth to wages and incidental expenses, and one-eighth to medical attendance, entertainment of visitors, and other superfluities. The next thing is to apportion the items of expenditure into weekly, monthly, or quarterly payments according to need. Thus, when the housewife has carefully set down the whole sum to be spent, and divided it suitably, she will be able at once to see how to accommodate herself to circumstances, and to raise one item or lower another accordingly. These calculations should be made upon paper, and a determination come to, to abide by such calculations at all hazards. Should the expenditure in any one department fall below what has been presupposed, a fund may be created therefrom to meet the excess of expenditure in another department where the apportionment has not been high enough.

WEAKNESS.—There is no derangement of the human economy more prevalent than that known under the general term of weakness; and none that requires a more persistent and direct mode of self-discipline. Such being the case, it has been deemed advisable to enlarge upon this topic, in order that the approaches of this malady may be warded off, and its attacks rendered less formidable. By weakness is meant that state wherein the ordinary actions of health are performed feebly, or below the usual limit. By it, must be understood a variation of amount, and not of kind. Weakness may exist by itself, and it may be accompanied with disease, or associated with oppression. Lastly, in some complicated cases, it may be

present in some of the normal actions when others are redundant. In the full enjoyment of health, the well-nourished body is neither thin nor fat; and the muscular substance is neither attenuated, nor is it wasted; and the brightness of the eye, the well-coloured skin, and general beauty of form, with quickness of thought, aptitude for action, and ability for rest, indicate normal health and absence of weakness. One of the first symptoms which betrays itself in connection with weakness, is a loss of muscular power, or sense of intense fatigue after ordinary exertion. The patient complains that, after he has done his work, he feels excessively tired—a symptom not to be neglected, as it is often the beginning of a train of circumstances, which may terminate fatally. Another symptom is a failure of the faculties of sensation. In some cases the vision is impaired, or power of adjustment to distances lessened. In others, a tendency to deafness exists, and frequently the palate is so far injured, that the appreciation of the quality of food is deteriorated. Again, the capacity for long-continued thought is materially lessened. The active imagination is diminished; the memory of certain circumstances and objects is impaired; and at other times, with the full possession of mental faculties, there is an unwillingness of action, and difficulty of being aroused, not at all consistent with the healthy subject. Inability to rest and take sleep sufficient for the restoration of the body, is another symptom to be noted. Where it exists, the body cannot be sufficiently refreshed to take on its usual state; and an absence of sound sleep cannot continue with impunity. Sometimes the appetite is capricious or flags; but besides the diminution in the power of taking food, there is a failure of the power of nutrition when food sufficient for the object is taken; a state which cannot long exist unaccompanied by a failure of the powers of performing the usual functions. Sometimes the failure of nutrition takes place in the muscular system; at others, the fatty tissue passes away; and lastly, certain specific parts may be observed to be unnourished, as the cornea of the eye, or the substance of the teeth. As manifold as are the conditions of vigour and health, so complex are the causes of debility and want of strength: such as irregularity of food, external influences, deprivation of rest and sleep, irregularity of the work performed, and hereditary defect. With regard to food, the quantity should be sufficient, the quality good, and the intervals at which it is taken appropriate. These points should be most fully considered. It may be here observed that persons who indulge to excess in alcoholic drinks, are practically starving, by taking an insufficiency of one kind of food, and excess of others. With regard to external influences, it is well known that purity of atmosphere, and a sufficiency of light are most important. Deprivation of rest and sleep have been already alluded to, but it should be known that an excess of these is equally liable to produce weakness. Irregularities in the performance of work,

require to be carefully guarded against. Muscular exertion may be carried on to absolute exhaustion; or it may be so neglected as to produce the most debilitating influence on the body. Monotonous occupation has, also, a deleterious effect upon the system, so much so that all persons require to be brought into monotonous work by degrees, and no one suffers more than a strong, healthy, well-nourished person, when suddenly subjected to such a course of life. Of all the causes of weakness, however, none equals in power anxiety and distress of mind; so much so, that an utter prostration of strength sometimes follows a severe affliction, or distress of mind. Where weakness has been inherited from the parents, or is likely to present itself, the patient should systematically regulate the various operations of life; and a stock of health and strength be laid up for probable emergencies.

As debility is the state in which the powers of man are lessened, the consequence of further diminution acts upon the system to his detriment. In a state of nature our muscles are given to us to procure our food; but when debilitated, labour cannot be performed, food cannot be procured, and inanition ensues. When food is procured, the system is called upon to perform very hard work to digest and adapt it to the use of the body. In weakness this necessary work cannot be given; the stomach does not perform its labour, and there is not sufficient nervous power to carry on this necessary work. The blood thus becomes enfeebled, the heart is unable to drive the blood perfectly over the system, and this debility engenders more and more debility, till disease ensues.

Weakness requires various modes of treatment, and in order to restore the strength and vigour of the system, considerable tact and attention are frequently required over a very long period. The first thing to be effected is the removal, as far as possible, of the causes and external influences which have produced the result; and this being accomplished, the human frame will frequently spontaneously return to health and strength. In all cases, a careful nursing of the system is demanded, and care should be taken to avoid exposure to cold, excessive exercise, or any other violent mode of treatment. The strength-restoring remedies should progress gradually and step by step, until the frame is hardened and the health brought to its normal condition. Great mischief is frequently done by exposing the feeble frame suddenly to external influences of too exacting or boisterous character. When considerable weakness exists under circumstances of great prostration, food in a liquid form is favourable for the moment; beef tea and rice-milk, being both excellent forms of this class of nourishment. Eggs contain all the proper elements of nutrition, the yolk especially, mixed with wine, representing all the elementary substances required for aliment by the human frame. Passing in order from the partially fluid articles of diet, the next kind of food which

has to be considered is that which is suitable for the system when it will bear but little, and yet that little must be of the lightest and most nutritious description. In this department may be reckoned, rice thoroughly baked, pure bread, toast, game, poultry, mutton, with the addition of mealy potatoes. These contain all elements necessary for nutrition, and are generally most easy for the stomach to digest. The administration of fish, at this stage, is objectionable on account of its difficult digestion. Beef may be regarded as too heavy where much weakness exists, and pork, under such circumstances, should be absolutely abstained from. It is necessary that the meat should not be tainted; and even the game may be more advantageously eaten fresh. As soon as possible, however, the patient should discard all limited diet, and take all the ordinary articles of food which the general experience of mankind finds adapted for nutrition. In great weakness, food should be taken more frequently than in health, but generally a certain bulk is good, as assisting the stomach to action. In all cases where weakness exists, as much care must be exercised in the fluid as in the solid food, large potations of pure water should be avoided, except in extraordinary cases. Where the case does not call for direct stimulus, tea and coffee, with milk and sugar, answer extremely well to represent the great part of the bulk of the necessary fluid. Some weakly persons require a gentle stimulant with their diuvers; for this purpose, hock will be found the most suitable. When the stimulus of a more generous nature is needed, claret will prove acceptable. When a still more invigorating auxiliary is demanded, port wine is the most potent. In purchasing wine for medicinal purposes, great pains should be taken to procure it genuine, otherwise more harm than good will result. Next in order to wine, is fermented liquor, of which table-beer, bitter ale, and porter, or stout, may be taken as types. Where these are applicable, they act as both meat and drink, having a sustaining power far beyond wine or alcoholic stimulants. Bottled stout effects speedy restoration of the system. The highly dried malt, which gives colour and flavour, is grateful to the stomach. In cases where the pure stimulus of alcohol is required, brandy may be resorted to, and for this purpose, French brandy is the best. Spirit is particularly applicable in cases of sudden or great prostration. As for the treatment of weakness, the variety of food and drinks is limited, so are the medicines restricted. Ammonia and ether may be demanded in cases of great prostration, bark and quinine to restore the tone of the system, and the preparation of iron to renovate the blood. Weakness, which can be treated by other means than these, can be treated as successfully without any medicine at all, by careful diet and nursing. The particular value of ether and ammonia is to maintain the action of the heart for the time being. The first is particularly valuable, where it requires rousing; the latter,

where the heart is too feeble and too frequent. Perhaps the quickness of the pulse is the best guide for the use of ammonia; for, as a rule, the quicker and more feeble the pulse is, above a hundred, the more frequently may ammonia be administered. Bark and quinine come to our aid as restoratives of strength. They do not act exactly alike. The tincture of bark, or concentrated decoction, is invaluable in many instances, whilst quinine is as preferable in others. In that form of debility which is seen in consumptive patients, more benefit is derived from the long-continued use of quinine, either with or without the occasional use of cod-liver oil, than from the use of any other simple remedy. With the exception of consumptive weakness, where quinine is so useful, iron, as a medicament, takes the first rank in the cure of debility. The union of quinine and iron is very valuable over large ranges of cases, and for very long periods. In the weakness attending scrofulous joiuts, maladies of the eyes, all forms of tubercular diseases, except those of the lungs, the last-mentioned treatment may be safely adopted for weeks, months, and in some cases for even a year or longer, with great advantage. In all these cases it is better to use this remedy in small quantities, over a long period, than to apply it in large quantities over a shorter period. However, it is preferable to administer it immediately before food, so that one may mix with the other, and both be absorbed in the system at the same time. Weakness depending upon or attending want of rest, requires narcotics. When opium is inadmissible, the application of cold must form the chief reliance; and there are very few cases which do not yield to the proper use of cold to the head; sometimes warmth may be also applied to the feet. Where weakness is combined with disease, the former should have the first share of attention; for, if the disease be violent, and the weakness severe, death may inevitably be expected. The support of the system during illness probably saves more lives than any other exercise of the medical art, and the success of the practitioner in a great measure depends upon the skill with which this support is in each case effected. Weakness, combined with oppression, cannot be remedied without the removal of the matter which oppresses the system; and sometimes the oppression cannot be remedied without the removal of the weakness.

In all forms of debility, or its complications, the conditions of health must be carefully regulated, as the patient regains his strength. Fresh air is highly useful, and the state of the atmosphere, as to its wetness or dryness, is of consequence. Light is another powerful agent in the cure of the debilitated. The appropriate exercise of the powers of the body is another important feature in the treatment of weakness. As a general rule, too much rest is not to be enjoined; for while over-work is to be carefully avoided in any part of the economy, a moderate degree of exer-

cise is of great value in promoting health. Moderate exercise, moderate thought, and even a moderate attention to ordinary business, are conducive to the restoration of health. All the functions should be exercised in a similarly moderate manner. As a rule, the extent of the exercise should be proportionate to the strength and diminution of the weakness. When persons in an extreme state of weakness require out-door exercise, the easiest motion will be obtained by a sailing-boat or yacht. The easiest of all forms of carriage exercise is the Hausom can. In other instances, the Bath chair or doukey chaise answer the purpose, before invalids are strong enough to have recourse to ordinary vehicles.

Weakness is important in its relation to every period of life. In infancy, many diseases arise from irregularities connected with suckling; and, during the first year, diarrhoea and water on the brain are the principal maladies which arise from debility. The weaned child relies more upon its own resources; and, up to five years of age, these complaints gradually decline in frequency. When twelve years of age is attained, many dangers have passed away, and the greatest mean value of life exists. Nevertheless, weakness has its influence, and diseases of the eyes, tegumentary system, and joints, are of frequent occurrence. The well-nourished youth passes through the diseases incident to childhood, whilst those who are imperfectly fed, are unable to withstand the effects. Next comes a period of great trial to the frame, the growth into puberty, upon which the welfare of the future adult so much depends. Excessive over-growth, without corresponding bulk, is a serious defect, which may be of lasting injury, decreasing the value of life, and increasing most seriously the liability to disease. The period of puberty requires the utmost care; a change in the system occurs, which, if rightly managed, makes the man; if wrongly, mars him. At this period, the mental and bodily labour should be most carefully adjusted to the powers of the system. Where this development takes place with undue rapidity, the studies should be lessened, the exercise of the bodily powers lowered, and the work adjusted to the capacity of performance. At this period, scrofula is triumphant, and obtains its greatest power. Consumption also runs its destructive career, and the frequency of the malady continually increases during manhood, till the middle period of life, when the reproductive functions cease. The conditions of health should be rigorously followed. All external agencies, especially heat, should be duly regulated, and the diet should be most carefully adjusted to the powers of digestion, and the requisite amount of food. In incipient old age, the administration of quinine and iron in small doses is attended with good results; in addition, wine, ale, stout, and spirits, according to the peculiarity of habit in each case, may be employed at meal-time with benefit. Finally, weakness is not to be considered only as a bodily ailment, but as

affecting the fortunes, and influencing the career of the individual. Where debility takes possession of a man, even in a modified degree, he is no longer able to attend to his business, and the ordinary pursuits of life, to which himself and those dependent upon him look for their support. The daily task is performed with difficulty, and at a further sacrifice to health, until utter exhaustion sets in, and all kinds of labour have to be abandoned. Most important is it, therefore, to regulate the human economy, so as to ensure an immunity from weakness; or, if existing, to have the power of applying remedies, to resist any further encroachments of this insidious malady.

WEANING INFANTS.—The age of nine months is about the average time for weaning, but the best guide is the nature of the milk, joined to the strength of the child, and its progress in teething. If the milk of the mother or nurse is becoming poor, it is not nearly so nutritious as cow's milk, and is positively prejudicial, from its tendency to produce irritation of the lining membrane of the stomach and bowels. If, therefore, the material supply is scanty, or of had quality, weaning is desirable for the sake of the child, and for the mother's sake. But when the time can be selected, that is to say, if the milk is good, and the mother and child both healthy, it may be deferred until the teething is in great measure completed, which is on the average about the twelfth month. Whenever it is decided upon, it will be necessary to separate the nurse and child, whether suckled by the mother or a substitute, because the constant pining for the breast is increased, to a great extent, by the sight of its possessor; while in her absence, the child is much more contented, and will take its food, and fall asleep in comparative ease and comfort. When the nurse has to wean the child without any assistance, it is generally a very troublesome affair, and often takes a long time and begets many struggles before it is accomplished. Almost all children are partly fed upon cow's milk and oatmeal, or flour, before they are weaned, and only require the extra allowance of that particular kind which has been found most suitable. By this age, biscuit-powder, or tops and bottoms, or rusks, will generally agree better than oatmeal, gruel, or milk thickened with flour. In many cases, however, oatmeal seems to suit to a much later age; and when it can be procured fresh ground and quite sweet, it is a most valuable kind of diet. By proper attention, the infant may be managed until it is two years old, at which time it may be treated in the ordinary manner. Particular care is to be taken to conduct the process of weaning gradually, that is to say she should, by degrees, give less and less of the breast, and more and more of artificial food; at length, she should only suckle the child at night. The autumnal mouths, in consequence of the prevalence of bowel complaints, should not be chosen for the period at which to commence weaning, if it can be avoided. In cases where the supply of milk becomes prematurely deficient, or

depraved in quality, it may be desirable, before deciding on weaning, to try to restore and increase the natural nutriment by such measures, dietary and medicinal, as are known by experience to have been effective in similar emergencies. The remedies most effectual for such purposes are some of the preparations of iron: the carbonate, the wine, and the metallic powder called Quévenne's iron. Of the carbonate, as much as will lie on a sixpence, or two grains of Quévenne's iron, or a dessert-spoonful to a tablespoonful of the wine of iron (steel wine), in water, may be taken three times a day. These preparations, and the doses of them named, may be used with safety for almost any length of time, due care being taken to use aperients, when required, as the medicines before mentioned are apt to prove constipating. The object may be further promoted by drinking infusions of anise or fennel seeds, a strong infusion of borage, decoction of marsh-mallows, or infusion of arrack, all quite harmless. Cod-liver oil, if well tolerated, may also prove very beneficial. It may be here remarked that the inability of the mother to suckle her offspring, is in many cases, the result of exposing the frame to tight pressure at that period of life when the female figure is advancing to maturity, and when the vanity of acquiring a slender shape, tempts many young girls to sacrifice not only their present ease, but their future health and usefulness.

WEASEL.—This little animal possesses a long flexible body, and an extraordinary length of neck; this, together with the closeness of its fur, its extreme agility and quickness of movement, combine to adapt it for the hunting of rats and mice in wheat ricks, in which way it is particularly serviceable to the farmer. In pursuing a rat or a mouse, the weasel not only follows it as long as it remains in sight, but continues the chase after it has disappeared, with the head raised a little above the ground, following the exact track taken by its destined prey. Should it lose the scent, it returns to the point where the scent was lost, and quarters the ground with great diligence till the scent is recovered; and thus, by dint of perseverance, will ultimately hunt down a swifter and even a stronger animal than itself.

WEATHER BOARDING, TO PRESERVE.—A composition for preserving weather boarding may be made as follows:—Take three parts of slackened lime, two of wood ashes, and one of fine sand; pass them through a fine sieve, and add as much oil to the composition as will bring it to a proper consistence for working with a painter's brush. Particular care must be taken to mix the materials thoroughly, and with this view, they should be ground on a stone slab with a proper muller; but where these conveniences are not at hand, the ingredients may be mixed in a large pan, and well beaten up with a wooden spatula. Two coats of this composition being necessary, the first may be rather thin; but the second should be as thick as it can be conveniently laid on.

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WEATHER PROGNOSTICS.—Persons in every position in society are led by motives of necessity or comfort to study the indications of the weather in the various appearances of the skies, the atmosphere, vegetation, &c. The most reliable indications of the weather are afforded by the formation and position of the clouds. When their elevation is very great; when their forms are small, well defined, and thread-like, they indicate rain. When they become lower and denser, losing their curl-like form, and spread into long dark streaks, they indicate wind and rain, the near or distant approach of which may be sometimes estimated from their greater or less abundance and permanence. Sometimes the clouds present a dense structure, are formed in the lower atmosphere, and move along with the current which is next the earth. The formation of these clouds to leeward in a strong wind indicates the approach of a calm with rain. When they increase rapidly, and appear lower in the atmosphere, with their surfaces full of loose flues, they indicate rain. When they do not disappear or subside about sunset, but continue to rise, thunder may be expected. The sheet cloud is the lowest of the clouds, its inferior surface commonly resting on the earth or water. The sheet cloud has long been regarded as a prognostic of fine weather, and it is generally indicative of calmness. Wane clouds appear to arise from the subsidence of mare's tails to a horizontal position; but eurl clouds do not always precede them. They are always thickest at one extremity, or in the middle. Their form and relative positions, when seen in the distance, frequently give the idea of a shoal of fish. At other times they appear like parallel bars, or interwoven streaks like the grain of polished wood. They precede wind and rain. They are almost always seen in the interval of storms. Sonder clouds are usually formed by eurl clouds collapsing as it were, and passing into small roundish masses, in which the thread-like texture of the eurl is no longer discernible. These clouds are very frequent in summer, and attendant on warm and dry weather. They are occasionally seen in the intervals of showers, and in winter. The train cloud is formed in the interval between the first appearance of the fleecy pile cloud, and the commencement of rain, while the lower atmosphere is yet too dry; also during the approach of thunder-storms. The indistinct appearance of it is chiefly in the longer or shorter intervals of showers of rain, snow, or hail. Nimbus clouds are attended by, or productive of heavy showers, accompanied by lightning or storm. The nimbus generally spreads a sudden and almost impenetrable gloom over the horizon, in the direction from which the storm approaches. Although it is one of the least beautiful of the clouds, it is frequently superbly decorated with its attendant the rainbow, which can only be seen in perfection when backed by the widely extended gloom of the storm cloud. The nimbus is known to be formed of two sheets of cloud,

in different electrical states, and hence it is so commonly attended with thunder and lightning. Clouds in any of the preceding forms may increase so as to completely obscure the sky, and at times put on an appearance of density, which, to the inexperienced observer, indicates the speedy commencement of rain. But, before rain falls, the clouds are generally seen to undergo a change. These appearances, when the rain happens over our heads, are but imperfectly seen. We can then only observe, before the arrival of the lower or denser clouds, or through their interstices, that there exists at a greater altitude a thin light veil, or at least a turbid haziness. When this has considerably increased, we see the lower clouds spread themselves till they unite at all points, and form a uniform sheet. The rain then commences, and the lower clouds arriving from the windward, move under this sheet, and are successively lost in it. When the latter cease to arrive, or when the sheet breaks, every one's experience teaches him to expect an abatement or cessation of rain. As the masses of cloud are always bleeded, and their arrangement destroyed before rain comes on, so the re-appearance of these is the signal for its cessation. The thin sheets of cloud, which pass over during a wet day, receive from the humid atmosphere a supply proportionate to their consumption, while the latter prevents their increase in bulk. Hence it will sometimes rain for a long time without any apparent alteration in the state of the clouds.

The sun appearing whitish or ill-defined and setting in the midst of a haze, betokens rain. A morning sun rising surrounded by a bright and lurid sky, is an indication of rain, because, rising in the east, it shines directly on the rain falling in the west, and thereby foretells approaching wet weather with this humid wind. But the sun setting in the midst of a bright light is a symptom of fine weather, because, when the sun sinks in the west, its rays fall on the rain in the east, whence the storm is departing. If, also, the sun's rays appear like horns—if shorn of his rays, or if he goes down into a bank of clouds in the horizon, inclement weather is to be expected.

The moon is another well-known indicator of the weather. If it looks pale and dim, we may expect rain; if red, wind; and if of its natural colour, with a clear sky, fair weather. Generally speaking, if the moon is rainy throughout, it will clear at the change, and the rain will probably return in a few days subsequently. If fair throughout, with rain at the change, the fair weather will probably return on the fourth or fifth day.

The winds exert the chief influence over the atmospheric condition which produces rain. Thus, if the winds blow from, instead of to a hilly country, the clouds will be carried elsewhere, and be precipitated in lower regions at a distance. But if the low-lying regions be warm, the clouds will be radiated, and their particles in a refined state, will be carried onward by the wind,

till they come over a cold high-lying country, where they will drop in heavy showers. The direction of the wind must evidently affect the state of the weather; if it come to us after blowing over a large surface of land, it will not be overcharged with moisture, and there will be dry weather: whereas, if the wind come from the ocean, it will bring the vapours of the ocean with it, and, of course, frequently moist weather. Thus, in England, a north-east or east wind is not so apt to bring rain as a south-east, or south, or south-west wind. Cold and warm weather, too, depend much upon the direction of the wind. As it blows from the cold regions of the north, or the warm and sunny districts of the south, most persons are sensible of the changes then produced, and will expect cold or warm, dry or wet weather, as the wind veers round to any of these points. But, beyond these general laws, speculations on the chance failing of rain in such countries as Britain are exceedingly hazardous, in consequence of the variability of the winds, and the conditions of the atmosphere at points far beyond our knowledge. In all countries, however, particular winds are noted for being accompanied either by wet or dry weather: thus, the south and the south-east winds bring much moisture into Britain, while those from the north and north-east are cold, dry, and penetrating. Not only does this arise from the immense surface of ocean over which these winds sweep south of the equator, but from these southerly winds being of a higher temperature, whereby they hold a greater quantity of vapour in suspension or solution, the condensation of which must be proportionately greater, on arriving in this colder climate. Accordingly it has been observed, that the wind will turn from the north to the south quietly, and without rain; but on returning from the south to the north, will blow hard, and bring much rain. Again, if it begin to rain from the south, with a high wind for two or three hours, and the wind falls, but the rain continues, it is likely to rain for twelve hours or more, and does usually rain until a strong north wind clears the air. For the same reason, winds from the west and south-west are considered to bring with them wet weather.

The seasons as at present existing, afford indications of what their followers will probably be. Thus, a moist autumn with a mild winter, is generally followed by a cold and dry spring, which greatly retards vegetation. If the summer be remarkably rainy, it is probable that the ensuing winter will be severe; for the great evaporation will have carried off too much heat from the earth. Wet summers are generally attended with an unusual quantity of seeds on the white-thorn and dog-rose bushes; hence the unusual fruitfulness of these shrubs betokens a severe winter; the cause being the moisture of the earth, and the consequent coldness by evaporation. When it rains plentifully in May, it will rain but little in September, and the reverse. When the wind is south-west during summer or

autumn, and the temperature of the air unusually cold for the season, both to the feeling and the thermometer, with a low barometer, much rain may be expected. A rainy winter redicts a cold spring, and therefore an unproductive year. The March winds causing great evaporation of moisture from wet soil, chill it so much that it is in a bad state for vegetation, and the crops must suffer accordingly. If, therefore, much or frequent rain falls in winter, the above-mentioned bad consequences will follow; whereas, if the winter had been dry, the injurious process of excessive evaporation in the following spring would not be undergone by the soil. When there has been no storm before or after the vernal equinox, the ensuing summer is generally dry. When a storm happens from an easterly point on the 19th, 20th, or 21st of May, the succeeding summer is generally dry. When a storm arises on the 25th, 26th, or 27th of March (and not before), in any point, the succeeding summer is generally dry. If there be a storm at south-west, or west-south-west, on the 19th, 20th, 21st, or 22nd of March, the succeeding summer is generally wet.

The animal creation affords many indications of the forthcoming weather. The low flight of swallows is a sign of approaching rain. The cause of this is, that they pursue flies, which delight in warm air; and these flies escaping from the excess of moisture above, descend nearer to the surface of the earth, and are there pursued by these birds. The appearance of cranes and other birds of passage early in autumn announces a very severe winter, for it is a sign that winter has already begun in the northern countries. Ducks, geese, and other water-fowls, before the approach of rain, may be seen to throw water with their bills over their backs, and dive frequently, the cause of which is, that although so much in the water they do not like being wetted to the skin; to avoid which, when warned by the peculiar sensation foretelling rain, they close their plumage together, by throwing a sudden weight of water upon their bodies, in the direction of the growth of their feathers. Cattle, before the approach of rain, may be seen stretching out their necks, and snuffing in the air with distended nostrils, which doubtless is occasioned by the odours of plants being more powerful than usual when the air is saturated with an excess of moisture. Dogs closely confined in a room, become drowsy and stupid before rain; the same is observed of cats in a less degree; horses neigh much; donkeys bray; cattle low; the fallow-deer becomes restless; and many other animals from the uneasiness they feel, owing to the altered condition, prognosticate the approach of rain. Insects being very sensible of every change in the state of the atmosphere, are good weather-guides; hence, fine weather may be predicted when many spider's webs are seen in the open air; also when bees are found far beyond their hives. On the contrary, when spiders remain hidden, and bees do not range abroad as usual, rain may be expected.

Many plants and flowers are excellent indi-

cators of atmospheric changes. The opening and shutting of some flowers depend not so much on the action of light as on the state of the atmosphere, and hence their opening and shutting betoken change. The common chickweed or stitchwort may be considered as a natural barometer; for if the small upright flowers are closed, it is a certain sign of rain. During dry weather they expand freely, and are regularly open from nine in the morning till noon. After rain they become pendent, but in the course of a few days they again rise. The purple sandwort is another indicator of the weather; its beautiful pink flowers expand only during the sunshine, and close at the approach of rain. The pimpernel has been justly named "the poor man's weather-glass." When its small brilliant red flowers are widely extended in the morning, a fine day may be expected; on the contrary, it is a certain sign of rain when the delicate petals of the flower are closed. If the Siberian sow-thistle shuts at night, the ensuing day will be fine, and if it opens, the weather will be cloudy and rainy. When the African marigold remains closed after seven o'clock in the morning or evening, rain may be expected. The stalks of the trefoil swell and grow more upright previous to rain, and the speedwell, so universal a favourite in every hedge-row, closes its blue corolla before rain comes on, opening again when it ceases.

Natural phenomena serve in a variety of ways to foretell the weather. Thus, when mountain ranges or distant objects appear nearer to us than usual, when sounds are heard more clearly from a distance, when the dust blows in eddies on the ground, rain may be expected.

Personal sensations act as weather predictors, to a certain extent. In certain habits of body, pain in the head, toothache, irritability of temper, pains in old sores which have healed, aching of the limbs, shooting of the corns, and excessive nervousness, are all signs of approaching wet weather. Headache, drowsiness, and general lassitude, frequently precede thunderstorms.

Domestic phenomena prognosticate the weather in various ways. The continued dampness of the baalustrades betokens heavy rain; the dampness of salt in the salt-cellars affords the same indication; the cracking of furniture, and the creaking of the boards of the floor and the stairs also, foretell rain. The fire burning dull is generally a sign of wet weather, but when it burns brightly dry weather and frost may be expected.

The following *weather proverbs* of various countries, are given for the purpose of familiarizing the various theories to the mind and assisting the memory:—

ENGLISH.

A rainbow in the morning is the shepherd's warning.

A rainbow at night is the shepherd's delight.

Evening red, and next morning gray
Are certain signs of a sunny day.

When the glow-worm lights her lamp
Then the air is always damp.

If the cock goes crowing to bed,
He'll surely rise with a watery head.

When you see the gossamer flying
Be ye sure the air is drying.

When black snails cross o'er your path,
Then a cloud much moisture hath.

When the peacock loudly bawls
Soon there'll be both rain and squalls.

When ducks are driving thro' the burn
That night the weather takes a turn.

If the moon shows like a silver shield
Be not afraid to reap your field;
But if she rises haloed round
Soon shall we tread on deluged ground.

When rooks fly sporting high in air
It shows that windy storms are near.

A cold May and a windy
Makes a fat barn and findy.

FRENCH.

When it thunderes in March, we may cry
alas!

A dry year never beggars the master.

January and February do fill or empty the
graury.

A dry March, a snowy February, a moist
April, and a dry May, presage a good
year.

To St. Valentine the spring is neighbour.

At St. Martin's, winter is in his way.

A cold January, a feverish February, a
dusty March, a weeping April, a windy
May, presage a good year and gay.

ITALIAN.

Dearth under water, bread under snow.

When the cock drinks in summer, it will
rain a little after.

As Mars hasteneth, all the humours feel it.

January commits the fault, and May bears
the blame.

A year of snow, a year of plenty.

SPANISH.

April and May, the keys of the year.

A cold April, much bread and little wine.

A red morning, wind or rain.

The moon with a circle brings water in her
beck.

Bearded frost, forerunner of snow.

Neither give credit to a cleau winter nor a
cloudy spring.

Clouds above, water below.

An easterly wind carries water in his hand.

A March sun sticks like a lock of wool.

When there is a spring in winter, and a
winter in spring, the year is never good.

When it rains in August, it rains wine or
honey.

The circle of the moon never filled a pond,
but the circle of the sun wets a shepherd.

In conclusion, it may be observed that
prognostications respecting the weather
must necessarily be more or less uncertain.
It has been seen that the winds are the
grand disturbers of the weather, and that to
them we may proximately ascribe the
occurrence of clear skies, fogs, clouds, rain,
&c. As the winds originate from circum-
stances frequently far beyond our horizon,
and cannot consequently be foreseen, every
prognostic of either fine or bad weather is
liable to total derangement.—See BAROME-
TER, RAIN-GAUGE, THERMOMETER, &c.

WEATHER-PROOF COMPOSITION.—Mix some sand with double the quantity of
wood ashes, well sifted, and three times as
much slackened lime; grind these with linseed
oil, and use the composition in the same
manner as paint; the first coat thin, the
second thick; and in a short time it will
become so hard as to resist effectually all
influences of the weather.

WEDDING CAKE.—Take five pounds
of flour, dried and sifted, two pounds of
fresh butter, five pounds of currants, care-
fully washed, picked, and dried, a pound
and a half of loaf-sugar, two nutmegs, a
quarter of an ounce of mace, and half that
quantity of cloves, all beaten and sifted;
sixteen eggs, yolks and whites kept sepa-
rate; a pound of blanched almonds pulped
in orange-flower water, and a pound each of
candied citron, lemon, and orange-peel, cut
into slices. Mix these ingredients in the
following manner:—First, work the butter
with the hand, till it is of the consistence of
cream, then beat in the sugar for ten
minutes, whisk the whites of the eggs to a
froth, and add the butter and sugar; next
beat the yolks for ten minutes, and the
flour and spices, and beat the whole together
for half an hour, or until the oven is ready;
then mix in lightly the currants, almonds,
and candied peel, with the addition of a gill
of white wine and a gill of brandy. Line a
hoop with paper, rub it well with butter,
pour in the mixture, and bake the cake in a
tolerably quick oven.

Flour, 5lbs.; butter 2lbs.; currants,
5lbs.; sugar, 1½lb.; nutmegs, 2; mace, ¼oz.;
cloves, ½oz.; eggs, 16; almonds, 1lb.;
orange-flower water, sufficient; candied
citron, lemon, and orange-peel, 1lb. each;
brandy, 1 gill; white wine, 1 gill.

Almond Icing for Wedding Cake.—Beat the whites of three eggs to a strong froth; pulp a pound of almonds very fine with rose-water, mix them, with the eggs, lightly together; add by degrees a pound of loaf sugar in powder. When the cake is sufficiently baked, take it out of the oven, and lay in this icing; then put the cake in the oven again, to brown.

Eggs, 3 whites; almonds, 1lb.; rose-water, sufficient; sugar, 1lb.

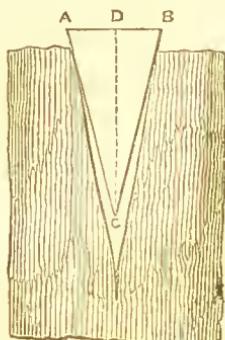
Sugar Icing for Wedding Cake.—Beat two pounds of double-refined sugar with two ounces of fine starch, sift the whole through a gauze sieve, then beat the whites of five eggs with a knife, upon a pewter dish, for half an hour; mix in the sugar a little at a time, or it will cause the eggs to subside, and will injure the colour; when all the sugar is put in, beat it for half an hour longer, and then lay on the almond icing, spreading it evenly with a knife. If put on as soon as the cake comes out of the oven, it will harden by the time the cake is cold.

Sugar, 2lbs.; starch, 2ozs.; eggs, 5 whites.

WEDDING CEREMONY, ETIQUETTE OF.—*The order of going to church* is as follows: — The bride, accompanied by her father, not unfrequently her mother, and uniformly by a bridesmaid, occupies the first carriage. The father hands out the bride, and leads her to the altar, the mother and the bridesmaid following; after them come the other bridesmaids, attended by the groomsmen, if there are more than one. The bridegroom occupies the last carriage, with the principal groomsman, an intimate friend, or brother; he follows, and stands facing the altar, with the bride at his left hand. The father places himself behind, with the mother, if she attend. The chief bridesmaid occupies a place on the left of the bride, to hold her gloves, handkerchief, and flowers; her companions range themselves on the left. If any difficulties occur from forgetfulness, the pew-opener can set everything right. Remember to take the licence and ring with you. The fee to a clergyman is according to the rank and fortune of the bridegroom; the clerk expects five shillings, and a trifle should be given to the pew-opener and sexton. When the ceremony is concluded, the bride, taking the bridegroom's arm, goes into the vestry, the others following; signatures are then affixed, and a registration made, after which the married pair enter their carriage and proceed to the breakfast, everyone else following. *The order of return from church* differs from going, in the fact that the bride and bridegroom now occupy the same carriage, the bride being on the bridegroom's left, and a bridesmaid, and a groomsman, or the father and mother of the bride, occupying the front seats of the carriage. *The wedding breakfast* having been already prepared, the wedding party return thereto. If a large party, the bride and bridegroom occupy seats in the centre of the long table, and the two extremities should be presided over by elderly relatives, if possible, one from each family. Every-

body should endeavour to make the occasion as happy as possible. One of the senior members, of either the bride or bridegroom's family, should, some time before the breakfast terminates, rise, and in a brief but felicitous manner, propose "Health and happiness to the wedded pair." It is much better to drink their healths together than separately; and, after a brief interval, the bridegroom should return thanks, which he may do without hesitation, since no one criticises a speech on such an occasion. A few words, feelingly expressed, are all that is required. The breakfast generally concludes with the departure of the married pair upon their wedding tour. *Cards are generally sent out* about a week or two previous to the return of the travellers, stating when the newly-wedded couple will be "at home." Plain cards are now most fashionable, but questions relative to them ought to be referred to the person who supplies them, as in this respect fashions are changing continually. *Reception:*—When the married pair have returned from their trip, and the day of reception arrives, wedding cake and wine are handed round, of which every one partakes, and each expresses some kind wish for the happiness of the newly-married couple. The bride ought not to receive visitors without a mother, sister, or some female friend being present, not even if her husband is at home. Many gentlemen are prevented, by their pursuits and engagements, from being present at these receptions; when such is the case, they should be represented by some old friend of the family, and an apology offered for the absence of the principal.

WEDGE.—A simple implement, of great utility in cases where an immense pressure and little motion are required. The wedge is frequently employed for splitting masses of timber or stone. Ships are raised in docks by wedges driven under their keels. Sometimes they have been applied to restore a declining edifice to a perpendicular position. In the annexed engraving, A C B is employed in cleaving wood, and its mechanical power is estimated by the proportion of A B to D C. This is sometimes



differently stated, and it is difficult to say

positively what is the exact power obtained by the use of the wedge, as it is generally driven by blows of a mallet or hammer; there can, however, be no doubt that the penetrating power is increased by increasing the length, D C, in proportion to the breadth, A B. The wedge, in part owes its value to a quality which, in most machines, is a diminution of their effect, that is, the friction which arises between it and the substance it divides. Were it not for the immense friction which prevails in the use of the wedge, it would recede to its original position, between the successive blows, and thus no progress would be made. Instead of this, however, the pressure and adhesion of the surfaces prevent the recoil, and thus a succession of slight blows effect a result which previously might have been supposed beyond human power to realise.

WEEDING.—All lands are more or less infested with weeds, which injure the crops and vegetation, by extracting the nourishment from the ground, and greatly impede the cultivation by spreading their entangled roots beneath the surface. The manure



deposited on the soil is destined exclusively for the support of what is meant to be raised, and every useless plant, which lives upon it, is so far noxious, and ought to be extirpated. The surest method of keeping away weeds is to prevent their growth, and thus cut off the vicious produce at its source. All embankments and boundaries of fields, and all road sides in the locality, should be cleared of every species of weed. It is also desirable to sow clean seed, and to use, if possible, such as are free from the seeds of noxious vegetables. Notwithstanding all ordinary precautions, lands will develop a crop of weeds, because some weeds will be uninjured for centuries in the soil, and the winds will waft others from great distances. Annuals and biennials may be partially extirpated by a well-wrought summer fallow, or if the soil be light, by the culture of potatoes or turnips, for the land in that case is well cleaned in spring, as well as hoed in summer. Hand-hoeing for this purpose is sometimes necessary, and the implement known as the weed-hook as seen in the engraving is effective. If, however, no ordinary process of tilling and cleaning the land extirpate the weeds, the more tedious and expensive operation of hand-pulling must be resorted to. Weeds are the insidious enemies of agriculture, and it is to their subtle growth that may be ascribed, much of the indifference to their extermination. Slovenliness is too often the rule; and sometimes for the want of the expenditure of a very trifling sum, whole acres are over-run with weeds, and reclaimed only by an outlay of many pounds. Manure is lavished; whereas, by an unremitting attention to the autumn stubbles, the task of keeping a clean soil is comparatively easy, less cultivation will be required, and more abundant and superior crops yielded.

WEEDS, DISPOSAL OF.—There are three methods of disposing of the vegetable matter of weeds, after the soil has been pared, and the refuse dragged into rows: First, to burn the heaps and spread the ashes; second, to mix lime with the vegetable matter, when carted to some convenient spot; third, to cart it to the homestead, where it serves to form the bottom of the cattle yard. With regard to the first plan, fine weather is indispensable to its practicability; but, when this prevails, it is the best and cheapest means of destroying all weeds, and, consequently, the one to be adopted, when the soil is not liable to be injured by the addition of ashes as a manure. With regard to the second method, in the event of rain, the application of lime will be the most efficacious means of destroying the vegetable matter, and converting it into a valuable manure. With regard to the third, the expense of carrying to and fro is a great objection. Some farmers send men into the stubbles with a fork to dig out the patches of couch, which are thrown into a cart, laid in a long heap on the field, then carted on dung, and the whole being turned, it is applied to the next crop. This is an expeditious method, but the treading is detrimental to the land, and the operation would be better performed by the scarecrow.

WEEKLY PROVISION.—The providing for the week is affected by many causes. Thus, at a distance from market, numerous articles are of necessity purchased at intervals which would be bought as they are wanted, where the proximity to good shops admits of such a convenient mode. In the country it is often impossible to procure butcher's meat, or even butter, except on market-days; so that even in the sultry summer weather, a stock sufficient for the interval must either be laid in at those times, or the articles must be altogether dispensed with. The chief purpose of this article is to show the most advantageous method of laying out money, when the income is limited. Supposing, therefore, that the annual amount to be expended in housekeeping is £65, it may be calculated that the manager will have the following materials to work upon; namely, about eleven pounds of fresh and salt meat, twenty pounds of bread, three pounds of flour, three shillings' worth of milk, butter, and cheese, three shillings' worth of grocery, two shillings' worth of green-grocery; two shillings for beer, and ninepence per week for washing materials. All these limited items will necessitate the greatest care to make them meet the various requirements. The great item of expenditure in housekeeping is the daily dinner, an economical programme for which will be found as follows:—

Sunday.—Sheep's head roasted, with chopped liver and mashed potatoes.

Monday.—Remainder of sheep's pluck fried, with dish of fried potatoes.

Tuesday.—Half a pound of bacon, fried with cabbage, and eaten with boiled potatoes; suet pudding.

Wednesday.—Bouilli, cabbage, and potatoes.

Thursday.—Stew made from beef-skirting, and potatoes.

Friday.—Two pounds of mutton miuced with vegetables.

Saturday.—Pea-soup made without meat, fried potatoes and suet pudding.

When a smaller family requires a very economical fare, the ease is somewhat difficult, because less variety can be obtained from those joints which are well known to be the only really economical ones. Nevertheless a good deal may be effected by management, as for instance in the case of a leg of mutton, from which the dinners of a whole week may be obtained without having any two dinners precisely alike, and without extra cost in any way. The following is the method proposed:—

Sunday and Monday.—Cut some steaks from off the large end and broil them.

Tuesday.—Cut off the knuckle and boil it with turnips, and serve with eaper sauce.

Wednesday.—Take some cutlets from off the side next to the knuckle, and fry with egg and bread-crumb.

Thursday.—Bone and stuff the fillet, and roast it.

Friday.—Eat part cold with salad.

Saturday.—Hash or mince the remainder.

Upon somewhat similar principles, a sirloin of beef may be treated in the following manner:—

Sunday.—Cut off the thin end, and stew with carrots, peas, and potatoes.

Monday.—Cut a thin steak from off one side, and broil it.

Tuesday.—Roast.

Wednesday.—Hash part of the remainder.

Thursday.—Eat part cold.

Friday and Saturday.—Mince part with carrots.

Supposing the amount set aside for house-keeping to be one hundred and fifty pounds a year, the housewife may lay in a weekly stock of eighteen pounds of meat, two shillings' worth of fish, thirty pounds of bread, two pounds of flour, six shillings' worth of milk, butter and cheese, seven shillings' worth of grocery, four shillings' worth each of greengrocery and beer, and five and sixpence to meet the expenses of the laundry. The eighteen pounds of meat may consist of a leg of mutton and a piece of the buttock of beef, which, allowing for one day's dinner on fish, will be three pounds per day on the whole. The bread will allow three-quarters of a pound per meal per day, with two pounds of flour during the week; and if the bread be made at home, there will be an extra quantity of flour, or a saving to the extent of about sixpence. The breakfast for the children must be confined to oatmeal porridge or flour milk, alternately with bread and butter, and bread and dripping, and also tea and sugar; for which last item sixpence may be allowed for breakfast and tea, and sixpence for the sugar, rice, raisins, &c., used at dinner for puddings. About sixpence or sevenpence is allowed per day for greengrocery and beer respectively, which is quite sufficient for these items. The chief difficulty is in the management of the meat, which requires

to be economized with great care to cause it to go as far as possible. The leg of mutton and the piece of beef must each last three days, and with a family of four or five children this may be found a somewhat difficult task. But this may be rendered easier by employing puddings as an auxiliary, so that the week's bill of fare will be something as follows:—

Sunday.—Leg of mutton roast, potatoes and greens, Yorkshire pudding.

Monday.—Cold mutton, potatoes and salad, rice pudding.

Tuesday.—Hashed mutton, fried potatoes, cauliflower, apple dumplings.

Wednesday.—Boiled beef, carrots and potatoes, suet pudding.

Thursday.—Pea-soup made from the mutton bones and beef boilings, fish and potatoes, currant dumplings.

Friday.—Cold boiled beef, potatoes and salad, bread, and batter pudding.

Saturday.—Bubble and squeak, potatoes, yeast dumplings.

In this economical way, a family of children may be kept well-fed and in good health, without suffering a particle of waste.

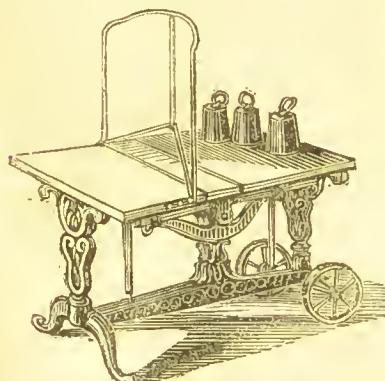
Until a housewife has gained some experience in eating, it is perhaps better in all cases either to buy a week's consumption, or that for a month, or a quarter, or half year, so that it may be divided into distinct portions, one of which may be easily set apart for each week. This is not possible with all articles of housekeeping, as some are perishable, and others are not in such great demand at one time as at another. Coals and candles, for instance, are needed in larger quantities in the winter than in the summer, so that usually in the latter part of the season one-half, or one-third at least, may be subtracted from the weekly sum, and put by to be afterwards added to that demanded in the winter months. The remedy, however, is simple enough, for though the expenses of each single week are not to be taken as the exact fifty-second part of the whole annual cost, yet after a time it will be found that one week will correct another, and that the cost of thirteen will give as nearly as may be the fourth part of the year's expences; and by proceeding further on the same principle, the outlay made in four weeks will show, though not so accurately, the thirteenth part of the annual expenditure. The keeping of a book for the purpose of entering the week's expenses is very much to be recommended; for this purpose half a quire of writing paper will do, or a school copy-book, or something of the kind—only it is best to have order in the book as well as elsewhere. There are several publications brought out for this purpose, in which the names of the various articles of consumption are printed with columns opposite to them, in which are to be set down the various sums expended for such articles during the week. Say, for instance, bread: opposite to this word you write 4s., or more or less, as the case may be. Then meat, 3s.; soap, 5d.; tea, 1s. 4d.; coffee, 1s.; sugar,

9d., and so on. When all the purchases are set down, then the different sums are added up, and their total amount cast. In three months the history of thirteen weeks' outlay will be thus obtained; and this acts beneficially in more ways than one, for, in looking over these items, opportunity is afforded for reflection, and for correcting such expenditure as may be considered extravagant, excessive, or unnecessary.

WEEVIL.—A beetle which generates a larva very injurious to fruit and grain. To destroy these insects, examine the suspected trees about ten o'clock at night, and if the beetles are discovered, they may be easily caught by laying a newspaper on the branches, into which the weevils will fall, if the tree be shaken vigorously. Toads are very effectual in keeping down the number of these destructive creatures.

WEIGHING CAGE.—A contrivance made in the form of a sort of open box or cage, by which any small animal, as a pig, sheep, calf, &c., may be very easily and expeditiously weighed, and with sufficient accuracy for general purposes. It is constructed with a strong wooden frame and steel centres, in which the pivots of the lever are hung; and upon the short side of the lever is suspended a coop, surrounded by strong network, in which the animal intended to be weighed is placed. The point of suspension is connected with the coop by means of two curved iron rods, which at the same time form the head of it; a common scale being hung on the longer side of the lever.

WEIGHING MACHINE.—A weighing machine well adapted for ordinary purposes, and generally used as a convenient contrivance, consists of a scale, which lies close on a cross-piece. The weights are put into a square dish, and when it descends it gives the weight required. The annexed figure



represents a weighing machine generally used for domestic purposes, where larger and heavier articles are to be weighed.

WEIGHTS AND MEASURES.—The following tables exhibit some of the most important measures of weight:

AVOIRDUPOIS WEIGHT.

27 11-32grs.	= 1dr.
16drs.	= 1oz.
16ozs.	= 1lb.
28lbs.	= 1qr.
4qrs.	= 1cwt.
20cwt.	= 1 ton.

This weight is used in almost all commercial transactions, and in the common dealings of life.

PARTICULAR WEIGHTS BELONGING TO THIS DIVISION.

8lbs.	= 1 stone, used for meat or fish.
7lbs.	= 1 clove. <i>cwt. gr. lb.</i>
14lbs.	= 1 stone = 0 0 14
2 stones	= 1 tod = 0 1 0
6½ tod	= 1 wey = 1 2 14
2 weys	= 1 sack = 3 1 0
12 sacks	= 1 last = 39 0 0

The above is used in the wool trade. A pack of wool contains 240lbs. A truss of hay weighs 56lbs.; and of straw 36lbs. A stone of glass is 5lbs.; a seam 24 stones.

8lbs.	= 1 clove.
32 cloves	= 1 wey in Essex.
42 cloves	= 1 wey in Suffolk.
36lbs.	= 1 firkin.

The above weights are used for cheese and butter.

TROY WEIGHT.

24grs.	= 1 pennyweight.
20dwt.	= 1oz.
12ozs.	= 1lb.

These are the denominations of troy weight, when used for weighing gold, silver, and precious stones, except diamonds. But troy weight is also used by apothecaries for compounding medicines, and by them the ounce is divided into eight drachms, and the drachm into three scruples, so that the latter is equal to twenty grains. For scientific purposes the grain only is used, and sets of weights are constructed in decimal procession from 10,000 grains downwards to one-hundredth of a grain. By comparing the number of grains in the avoirdupois or troy pound and ounce respectively, it appears that the troy pound is less than the avoirdupois in the proportion of fourteen to seventeen nearly, but the troy ounce is greater than the avoirdupois, in the proportion of seventy-nine to seventy-two nearly. The carat used for weighing diamonds is $3\frac{1}{6}$ grains. The term, however, when used to express the fineness of gold, has a relative meaning only. Every mass of alloyed gold is supposed to be divided into twenty-four equal parts; thus, the standard for coin is twenty-two carats fine, that is, it consists of twenty-two parts of pure gold and two parts of alloy. What is called the new standard, used for watch-cases, &c., is eighteen carats fine.

APOTHECARIES WEIGHT.

1 grain	=	1.0978 gr. avoird.
20 grains	= 1 scruple	= 21.94 ,,
3 scruples	= 1 draebm	= 65.32 ,,
8 drachms	= 1 ounce	= 526.628 ,,
12 ouuces	= 1 pound	= 13oz. 2dr. 1scr. 9½gr. avoird.

MEASURES USED BY APOTHECARIES.

1 minimi	=	0.05915 of a millilitre.
20 miuiuns	=	1 fluid scruple.
3 fluid scruples	=	1 fluid drachm.
8 fluid drachms	=	1 fluid ounce.
20 fluid ounces	=	1 pint.
8 pints	=	1 gallon.

A few brief notices of *Foreign Weights and Measures* are given herewith, as they are often useful while reading industrial statistics of foreign countries :—

France.—The new French system is called metrical, as derived from the measurement of the earth. Its first measure, the metre, is presumed to be the ten-millionth part of a line drawn from the pole to the equator, and is 39'37079 English inches. All the multiples and subdivisions of every measure are decimal, and are formed by the same prefixes. For 10, 100, 1000, 10,000, the Greek syllables *deca*, *hecto*, *kilo*, and *myria* are prefixed; and for tenths, hundredths, and thousandths, the Latin syllables *deci*, *centi*, *milli*. Greek prefixes indicate multiplication, Latin prefixes division. Thus, the hectometre is 100 metres, and the centimetre the hundredth part of a metre. The metre being thus settled, the other fundamental measures are formed as follows :—For surface or area, the *arc*, which is a decametre square, or 100 square metres, or .02471143 of an English acre, or 3.9538 English perches. For solidity the *stere*, or cubic metre, 35.32 cubic feet English, or 220.09697 imperial gallons English. For liquid measures, the *litre*, or cubic decimetre, .22009687 of an imperial gallon, or a very little more than a pint and three-quarters English. For weight, the *gramme*, a cubic centimetre of distilled water at the freezing point, .00220606 of an English pound avoirdupois, or, roughly, 50 kilogrammes make a hundredweight.

Austria.—In Austria proper, gold and silver are weighed by the *Vienna marc* of 4333 grains. The *pfund* is 1.235lb. avoirdupois. The *metzen* is 1.691 of the English bushel; the *juder* is 31.24 bushels. The *foot* (half the short ell), is 11.667 inches. The long ell is 24 inches.

Belgium.—The French metrical system.

Constantinople.—The *cheqee* is 4957 grains. The *oke* is 2.832lbs. avoirdupois. The *killow* (dry), is 7.296 gallons. The *anud* is 1.150 of the English gallon. The *pike* is 27 inches.

Denmark.—The pound for gold and silver is 7266 grains. The *commercial pound* is 1.1025lbs. avoirdupois. The barrel is 3.8264 bushels. The *wiertel* is 1.701 of the English gallon. The *foot* or *half-ell*, is the Rhineland foot of 12.356 English inches. The *toende* of corn is 5½ acres.

Florence and Leghorn.—The *cantaro* is 150 1093

pounds of .74864lbs. avoirdupois each. The *stajo* is .6702 of the English bushel. The *bariccio* is 10.033 gallons. The *braccio* is 22.93 English inches. The *saccata* is 1 acre 36 perches.

Frankfort.—For gold and silver, the *Cologne marc*. The common pound is 1.03lbs. avoirdupois. The *centner* is 112.25lbs. avoirdupois. The *malter* is 29.705 bushels. The *ahn* is 32.454 gallons. The *foot* is 11.27 inches, the *ell* 21.24 inches.

Genoa.—The *pound sottile* for gold and silver is 4891.5 grains. The *pound grosso* is 76875lbs. avoirdupois. The *mina* is 3.321 bushels. The *mezzarola* is 32.57 gallons. The *palma* is 9.725 inches.

Hamburg.—The *Cologne marc* is 3603 grains. The *pound troy* is 2 *marcs*; but the *commercial pound* is 1.0681lbs. avoirdupois. The *last* of wheat (30 *sheffes*) is 10.9 quarters. The *ahn* is 31.85 gallons. The *foot* is 11.289 inches. The *sheffel* of land is 1 acre 6 perches.

Holland.—The *marc* is 3798 grains; the *pound* is 2 *marcs*; but the *commercial pound* is 1.0893lbs. avoirdupois. The *last* is 10.231 quarters. The *aam* is 34.16 gallons. The *Rhineland foot* is 12.36 inches. The *Rhineland perch* is 12 Rhineland feet; and the *Rhineland morgen* or *acre* is 2 acres 16 perches.

Lübeck.—For gold and silver, as at Hamburg. The *commercial pound* is 1.0655lbs. avoirdupois. The *sheffel* is .92 of the English bushel. The *ahn* 31.85 gallons. The *foot* or *half-ell* is 11.346 inches.

Malta.—The *pound* for gold and silver is 4886 grains. The *commercial pound* is 1.745lbs. avoirdupois. The *salma* is 7.968 bushels. The *foot* is 11.167 inches. The *canna* (8 *palmi*), is 81.9 inches.

Milan.—The *mark* is 3627 grains. The *pound sottile* is 72.06lbs. avoirdupois; the *pound grosso* is 1.632lbs. avoirdupois. The *moggia* (37 *quarliari*) is 4.0234 bushels. The *brenta* (12 *quartari*) is 15.71 gallons. The *braccio* is 23.42 inches. The metrical system is also introduced.

Naples.—The *pound* for gold and silver is 4950 grains. The *cantaro grosso* is 196.5lbs. avoirdupois; the *cantaro piccolo* 106 pounds avoirdupois. The *tomolo* is 1.407 of the English bushel. The *barile* is 9.172 gallons. The *palmo* is 10.38 inches. The *moggia* is 3 rods 12 perches.

Netherlands.—The French metrical system.

Portugal.—The *marc* is 3541.5 grains. The *commercial pound* is 1.0119lbs. avoirdupois. The *moyo* is 22.39 bushels. The *almude* is 3.6407 gallons. The *foot* is 12.944 inches.

Prussia.—The *Cologne marc* is 3609 grains; 2 *marcs* are a *commercial pound*, or 1.0311lbs. avoirdupois. The *sheffel* is 1.5116 of the English bushel. The *eimer* is 15.11 gallons. The *foot* is 12.356 inches; the *ell* two-thirds of a metre. The *morgen* or *acre*, is 2 rods, 21 perches.

Rome.—The *pound* is 5234 grains, or 7477lbs. avoirdupois. The *rubbio* (4 *garti*) is 8.1012 bushels. The *barile* (32 *boccali*) is 12.841 gallons. The *foot* is 11.72 inches. The *builder's canna* of 10 palms, is 87.96 inches.

Russia.—There is but one *pound*, .9026lbs. avoirdupois. The *pood* is 36lbs. avoirdupois. The *chertwert* is 5.7693 bushels. The *vedro* is

27048 gallons. The inch is the same as in England; the arshne is 28 inches; the foot is 13.75 inches, but the English foot is in common use. The Russian verst, or werst, is 0.664 (or about two-thirds) of an English mile. The dessentiu is 2 acres, 2 roods, 32 perches.

Sardinia.—Adopts the French metrical system.

Saxony.—For gold and silver, the Cologne marc. The commercial pound is 1.0294 lbs. avoirdupois.

The Dresden wispel (24 scheffels) is 69.85 bushels; the Leipzig wispel is 91.747 bushels. The Dresden eimer is 14.89 gallons; the Leipzig eimer 16.75 gallons. The Dresden foot is 11.14 inches; the Leipzig foot is 11.13 inches. The acre is 1 acre, 1 rood, 18 perches.

Sicily.—The pound is 7 lbs. avoirdupois. The cantaro grosso is 192.5 lbs. avoirdupois; the cantaro sottile is 175 lbs. avoirdupois. The salma grossa is 9.46 bushels; the salma generale 7.59 bushels. The salma of wine is 19.23 litres. The palmo is 9.5 inches.

Smyrna.—The cheqee is 495 grains. The rotollo is 1.2748 lbs. avoirdupois. The killov is 11.3 gallons. The pike is 27 inches.

Spain.—The Castilian marc for gold and silver is 4800 grains; the commercial pound is 1.0144 lbs. avoirdupois. The fanga is 1.55 of the English bushel. The arroba of wine is 3.533 gallons. The foot 11.128 inches; the vara is 33.334 inches. The fanegada (for corn land) is 1 acre, 21 perches.

Sweden.—The mint marc is 3252 grains. The commercial pound is 937.6 lbs. avoirdupois. The dry tunner is 4.023 bushels; the liquid tunna is 48 kanns of .5756 of the English gallon each. The foot or half-el is 11.634 inches. The tunneland is 1 acre, 35 perches.

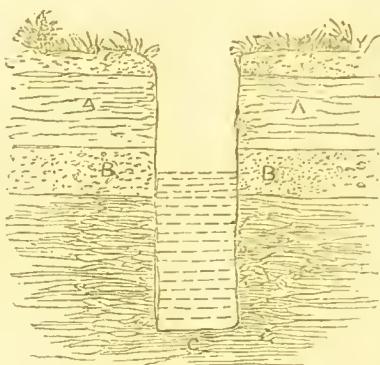
Switzerland adopts the French metrical system.

United States.—The weights and measures are those of England before the introduction of the imperial standard.

WEIGHTS AND MEASURES, LEGAL SUPERVISION OF.—Persons who own, possess, or use weights and measures, are held responsible for their integrity. An Act of Parliament provides that every person who shall use or possess any weights or measures which are light, deficient, or otherwise unjust, shall, on conviction, forfeit a sum not exceeding five pounds. To ensure the fidelity of weights and measures as much as possible, certain government inspectors are appointed, who are empowered to enter the premises of persons using weights in the ordinary course of trade, to test them, and if found deficient to impound them, and lay an injunction against the offender.

WELL.—A vertical excavation in the earth; always of such a depth as to penetrate the porous stratum charged with water, and mostly as much deeper as to form a reservoir in this stratum or in that beneath it. The form of the well is generally circular, and to prevent the crumbling down or falling in of the sides, this circle is lined with timber, masonry, or zones of metal. The earthy materials, being thus pressed on equally in every point of this circle, are kept in equilibrium. When the

well is not very deep, and is in firm ground, this easing is built from the bottom to the top, after the excavation is finished; but when the soil is loose, the excavation deep, or its diameter considerable, it is built on the top in zones, sometimes separated by horizontal sections of thin oak boards, which, with proper management, sink down as the excavation proceeds. Wells are of two kinds:—1. Common shallow wells, which are often only reservoirs. 2. Artesian wells, or constantly flowing wells, depending upon a high source. Shallow wells often penetrate a thin stratum or two, A A, and enter another of sand or some porous substance B B, in which water is contained.



When this stratum is pierced, water appears, and is called a spring. Should this not communicate with any higher source, the water that drains into the well sunk down to C will not rise upwards, and therefore it is necessary to sink this well deeper, so as to form a reservoir for the water that runs into it from the stratum B. In some cases, the well is a mere tank, into which the water may ooze from the gravel on the surface. An Artesian well is a well sunk down to some stratum fed by a high source. When the stratum with water is arrived at and pierced, the water suddenly rises in the well as high as the source of the spring, which may even be higher than the ground where the well is sunk, and then the water will pour out as a fountain or overflow. A great variety of methods of raising water from wells has been practised at different times and in various countries, each of which may have some convenience or advantage to the locality, and other circumstances. The lever and bucket, is one of the most primitive of these contrivances. A long pole, supported by a post, acts as a lever to raise the bucket; and from the end of the lever the water may be raised even by a child, with very trifling exertion. But it is only calculated for those cases where the water is very near the surface. It may be constructed by any person who can make a lever and upright post. The next method is the bucket raised by a windlass. When

the well is very deep, or a large supply of water is wanted, this may be assisted by machinery turned by any of the ordinary powers. An old, but ingenious mode of raising water from a well to the upper part of a house may not be unworthily adopted. A post is fixed close to the well; this is connected by a fixed cord with the window or other opening in the upper part of the house where the water is to be introduced. On this cord a wooden collar is placed, and slides freely from one end to the other; the bucket rope is put through the hole in the collar, and over a pulley in the window, and thus the bucket is raised, first perpendicularly from the water in the well till it comes in contact with the collar, when, the power being continued, the collar slides along the fixed rope, till, together with the bucket, they reach the operator in the window. A chain of buckets consists of a number of these receptacles fastened to a chain or rope, the two ends of which are united; the chain goes over a wheel and hangs down into the well, with its buckets having their mouths downwards as they descend. On arriving there, the buckets become filled with water, and, by the turning of the wheel and the motion of the chain, they are brought up, while those on the other side of the chain go down empty. The endless rope is a most simple contrivance for raising a small quantity of water. A coil of soft hemp rope is made to pass over a wheel at top, and another at the bottom of a well. The rope is put in motion by a handle, and so much water adheres to it in rising that it is sufficient to make a constant small stream. To prevent the water from descending again with the rope, it is made to pass through a tube at the top to squeeze off the water.

WELSH ALE.—Pour on four bushels of fine pale malt, twenty-one gallons of hot water (but not boiling). Let it stand for three hours closely covered; in the mean time, infuse two pounds of hops in a little hot water, run the wort upon them, and boil the whole for three hours, then strain off the hops.

WELSH PUDDINGS.—Take four eggs, and an equal weight of butter, flour, and sugar. Whisk the eggs for ten minutes, or until they appear extremely light; then add the sugar by degrees, and continue the whisking for four or five minutes; next, strew in the flour, also gradually, and when it is smoothly blended with the other ingredients, pour the butter to them in small portions, beating each portion in, until all traces of it have disappeared. It should be previously just liquefied with the least possible degree of heat; this may be effected by putting it into a well-warmed saucepan, and shaking round until it is dissolved. A few grains of salt should be thrown in with the flour, and the rind of half a lemon rasped on sugar or grated; but in lieu of this, pounded mace or any other flavouring may be substituted. Pour the mixture directly it is ready into well-buttered cups, and bake the puddings for

about twenty-five minutes. They should be served with wine sauce.

Eggs. 4; flour, sugar, and butter, of weight equal to the eggs; salt, a few grains; flavouring, to taste.

WELSH RABBIT, OR RAREBIT.—Toast a slice of bread on both sides and butter it; toast a slice of Gloucester cheese on one side, and lay that next the bread, and toast the other with a salamander; rub mustard over, and serve very hot, and covered.

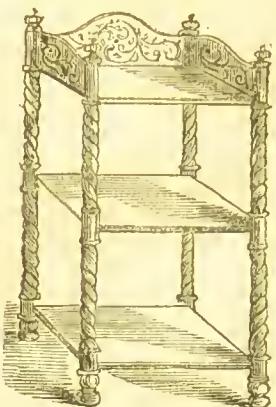
WEN.—A chronic tumour, though chiefly confined to the disease of the glands of the throat known as goitre.—See TUMOURS, THROAT.

WESTPHALIA HAM, TO CURE.—Rub each ham well with an ounce and a half of pounded saltpetre, and an equal quantity of coarse brown sugar. The following day, boil in a quart of strong stale beer or porter, a pound of bay salt, the same of common salt, half a pound of coarse brown sugar, of pounded black pepper and cloves an ounce each, and a small bit of sal prunella. Pour it boiling hot over the ham, and let it lie a fortnight, rubbing and turning it twice or thrice daily, when it should be smoked for a fortnight.

WET-NURSE, CHOICE OF.—In the selection of a wet nurse there is some difficulty, since there are not always mothers who have been bereaved of their babies, or one who has milk and strength sufficient for two infants. Many points are to be considered in making this choice. The age of the foster-parent should not exceed thirty years, nor should her milk be more than three months old. She should be in health, free from scorbutic or serofulous taints, and from cutaneous scurf or eruptions, cleanly in her person, and extremely neat and orderly in her management of whatever concerns the infant. She must be sober and temperate, for persons addicted to the habitual use of stimulants and intoxicating drinks are not suitable for nurses; the diet should be wholesome, and neither scanty nor too full. The best evidence of freedom from taint of specific disease in the habit of a wet-nurse, will be furnished by her freedom from cutaneous eruptions, from sore throat and other mucous affections; having a cheerful and contented expression of countenance, a healthy-tinted skin, clear voice, sound teeth, sweet breath, and healthy functions. Her infant should be found to be plump, rounded, contented, with smooth skin, clean mouth, unobstructed nostrils, and dependent upon the food of the breast alone. Should there still remain any doubt as to the suitableness of the wet-nurse, the testimony of a medical man as to the nutritive properties of the milk, and general fitness, should be solicited.

WHALEBONE.—This material is very useful for a variety of purposes; its combined properties of pliancy and strength, rendering it well adapted to enter into the articles of manufacture which require to be so made.

WHAT-NOT.—This somewhat eccentric name is given to an article of furniture, such as seen in the engraving; it is



designed as an elegant and convenient stand for drawing rooms, on which to place miscellaneous articles.

WHEAT.—This is the most important of all grains, and its varieties are numerous. A general division of wheat is made into white and red, with several shades between, and winter and summer. Winter wheat may be brought into the nature of summer, by altering the time of sowing. If winter wheat be sown at the period for putting summer wheat into the ground, in the course of two seasons the winter will become of a similar habit as the summer, and the same process will bring a summer wheat to a winter one. In general, the fine white wheats are preferred to the brown and red; but the latter is most profitable for wet adhesive soils and unfavourable climates, on account of its hardness and ripening early. The variety of wheat most profitable to be produced, must depend upon the nature of the soil, as land which has produced an indifferent crop of one kind, may yield an abundant crop of another kind; and the land is frequently found to yield better crops if the varieties be alternately changed. The richer description of clays and strong loams are the best adapted for the production of wheat; but, if properly cultivated and well manured, any variety of these two soils will produce excellent crops of this grain. Good wheat land ought always to possess a large quantity of clay, and little sand; for although light soils may be made to produce good crops, yet strong clay lands in general yield the heaviest grain. The season for sowing wheat is necessarily regulated by the state of the land as well as of the season; on which account it is not always in the grower's power to choose the moment, he would prefer. After fallow, as the season allows, it may be sown from the end of August till the middle of November. On wet clays it is proper to sow as early as possible, as such soils, when thoroughly drenched with

moisture in autumn, are seldom in a proper state for harrowing till the succeeding spring. In the opinion of many experienced husbandmen, the best season for sowing wheat, whether on fallow, rag-fallow, or ploughed clover stubble, is from the beginning of September till the 20th of October; but this must depend on the state of the soil and the weather. On dry gravelly loams, in good condition, after a clover crop, and well prepared, wheat may be sown till the end of November. After turnips, when the crop is consumed or fed off, and the ground can be properly ploughed, wheat may be sown any time betwixt the 1st of February and the middle of March; and it is customary to plough and sow the land in successive portions as fast as the turnips are consumed. It is only on turnip soil of a good quality, verging towards loam, and in high condition, that winter wheat, sown in spring, can be cultivated with success. When circumstances are favourable, however, it will generally happen that such lands, when wheat is not too often repeated, will nearly produce as many bushels of wheat as barley.—See CORN.

WHEAT PICKLING.—A process by which wheat is prepared for sowing, is conducted as follows:—For some two or three weeks let a tub, be placed to receive a quantity of chamber-lye, and whenever the ammonia is ascertained to be disengaged from the lye, it is ready for use. It is better that the ammonia should be of such strength as to cause the eyes to smart and water be added to dilute it, than that the lye should be used fresh. This tub should be removed to the straw-barn, as also the wheat in sacks to be pickled, and part of the floor swept clean, to be ready for the reception of the wheat. Let two baskets be provided, capable of holding easily about half a bushel of wheat each, these baskets having handles standing upright above the rim. Pour the wheat into the basket, from the sack, and dip the basketful of wheat into the tub of lye, as far down as completely to cover the wheat, the upright handles of the baskets preventing the hands of the operator being immersed in the lye. After remaining in the liquid for a few seconds, lift up the basket, let the surplus liquid run out of it, and then place it upon the drainer, which stands on the empty tub, so that the liquid may drip to its fullest extent, till the empty basket is filled with wheat and dipped in the tub. Now empty the drained basket of its wheat on to the floor; and as every basketful is emptied, riddle a little slaked caustic lime upon the wheat, through a wire wheat riddle. Thus all the wheat wanted at one time is pickled and emptied on the floor, when the pickled and limed heap is turned over and-over again, till the whole mass appears uniform. The mixing by turning is best managed as follows:—Let two men be each provided with a square shovel, and let them turn over the heap, one bearing the handle of his shovel in the right hand and the other in his left—both making the shovels meet in thin edges upon the floor,

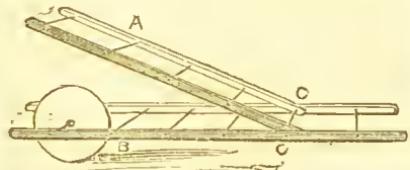
under one end of the heap of wheat, and, on lifting each shovelful of wheat, turn it over behind them, proceeding thus by shovelfuls, to the other end of the heap. Let the operators return in a similar manner in the opposite direction, and sufficiently often to cause the heap of wheat to be completely mixed and dried with the lime. The pickled wheat is then put into sacks, and carried to the field in carts.

WHEAT-EAR.—A bird very common in England, and especially at certain seasons, when it frequents newly-tilled grounds, and is a close attendant on the plough in search of insects and small worms, which are its principal food. In length, the white-ear is about five inches and a half. The bill is black; eyes hazel; over the eyes, cheek, and ears, is a broad black streak, and above it a line of white; the top of the head, hinder part of the neck, and the back, are bluish gray; the wing-coverts and quills are dusky, edged with rusty white; the legs and feet are black. The wheat-ear breeds under shelter of a tuft or clod, in newly-ploughed lands or under stones, and sometimes in old rabbit-burrows. In some parts of England, large numbers are taken in snares made of horse-hair, placed beneath the turf. These birds are also known by the name of ortolans.

WHEAT-EARS, TO DRESS.—These may be dressed in the same manner as larks; or when trussed for roasting, brush each bird over with the yolk of an egg, or what is better, dip them in batter; roll them in fine bread-crumbs, and spit them on a wooden or silver skewer, a dozen upon each. When spitted, brush them again with the egg, and dredge them with the bread crumbs; tie the skewers upon a spit, and roast them before a brisk fire, basting all the time with fresh butter; they will take about twelve minutes. They should be dressed the same day on which they are killed.

WHEELBARROW.—A well-known implement used in the practice of agriculture, horticulture, and for building purposes.—See BARROW.

WHEELBARROW LADDER.—This utensil comprises a wheelbarrow and a ladder. Half the ladder, A, may either



remain on the barrow frame, B, where it will serve, by its pressure, to keep down any light bulky matter, such as pea haulms; or it may be removed altogether by withdrawing the bolt, C C. A man standing on the third step, and holding with one hand by what forms the train of the barrow, may easily gather fruit or flowers at the height of ten or twelve feet from the ground.

WHEELS.—These parts of a vehicle are usually made of a number of pieces of ash, with a centre-piece of oak called the nave, twelve radiating spokes, and an iron tire. The axle is the most important part of the carriage in connection with the wheel, and numerous inventions have been introduced to render the working of this agent more perfect. The simplest form of axle is the common kind, which consists merely of a bar of iron having a slight shoulder at the part where it comes in contact with the nave of the wheel, and a screw and nut to keep the wheel on. A plain iron box is made to fit this, and is “boxed” into the wheel. To obviate the noise of this axle, and its tendency to come off, several contrivances have been designed, which, if carefully attended to, are equal to all that is required. It is essential to watch the wear and tear of wheels, as their breaking, when in use, may be the cause of serious accidents, and in all cases create inconvenience. The tires of wheels especially require guarding; when the irons are getting thin, have them taken off before they become too weak to protect the woodwork; the best plan is, when the irons are half-worn out, and before the joints in the woodwork get loose, as they wear most on the outer edge, to have them taken off and turned; if the woodwork is sound, they will run half as long as they did at first; then, if the woodwork continues sound, have new irons put on. When new wheels are put on to old carriages, they should be made a fortnight before they are painted, and should not be put on for use till a fortnight after they have been painted.

WHEEZING.—An affection peculiar to new-born infants, arising from a collection of mucus in the air-passages. It is not a dangerous symptom, if it occur immediately after birth, and generally leaves the child as soon as the functions begin to perform.

WHEELKS.—A small kind of shell-fish which are generally eaten with a pickle of vinegar and salt; they are extremely indigestible, and it is only the very strongest stomachs that can admit of their being eaten.

WHEY.—A mixture chiefly composed of water and laetic acid, with a slight proportion of casein, butter, and sugar. It is therefore highly nutritious, but forms an excellent diluent in inflammatory complaints, and also greatly promotes the secretions.—See ALUM, LEMON, MUSTARD, WINE, ETC.

WHEY, A LA FRANÇAISE.—Mix together equal parts of vinegar and cold water; a tablespoonful of each will suffice for a pint of milk. It is not, however, all to be put in, whether necessary or not; but when the milk just boils, pour in just as much of the acid as will turn it, and no more. Beat up together the white and shell of one egg, which boil up in the whey; then set it aside till quite clear. Pour it off very steadily through a muslin strainer, and sweeten to taste with loaf sugar. This whey is very pleasant and answers every good purpose of white wine whey, while it is not liable to the objection of being heating, and is also very much less expensive.

WHIGS.—A kind of cake made in the following manner:—Rub a quarter of a pound of butter into two pounds of flour; with half a pint of warm cream, and a gill of ale yeast, make it up into a light paste and set it before the fire to rise. Grate a nutmeg with some beaten mace and cloves, a quarter of an ounce of caraway seeds, and a quarter of a pound of sugar: work all thoroughly together, roll the dough out tolerably thin, and make the cakes up into any size and form desired. The usual way is to make a large round cake, and to cross it so that it may be easily divided into quarters when made up, put them on tin plates, set them before the fire, or in front of the oven, till they rise again, then buke them in a quick oven.

WHIP. Butter, $\frac{1}{2}$ lb.; flour, 2lbs.; cream, $\frac{1}{2}$ pint; yeast, 1 gill; spice, sufficient; caraway seeds, $\frac{1}{2}$ oz.; sugar, $\frac{1}{2}$ lb.

WHIN.—A plant, known also by the names of firze and gorze, to be found wild on dry light soils, and rather hilly situations. It is known as a nourishing food for cattle, and is sown in some parts of England for that purpose. Few plants deserve the attention of the farmer more than the whin; horses are peculiarly fond of it, it tends to fatten them, and if mixed with grain, fits them admirably for the performance of hard labour. Cattle eat it perfectly well, provided it be thoroughly bruised; this operation of bruising is performed by a rammer, as seen in the engraving; it is a bulky und heavy instrument, shod with iron cutters, properly sharpened, and fastened by their ends. With this instrument as much whin may be bruised by one man in the space of twenty minutes, as will serve a pair of horses for the day. No large quantity of whins should

this lining to slope backwards. Any kind of stones, gathered from the land will answer the purpose very well; upon the top of the bank, sow whin seeds rather thick, and throw a few of them along the face of the bank. Young plants will quickly appear. Suffer them to grow for two years, and then cut them down, and as the seeds freely insinuate themselves among the crevices of the stones, the whole face of the bank will become a close hedge, sending forth luxuriant shoots. If another ditch be made on the opposite side of the bank, and if this be manured in a similar way to the foregoing, and the hedge cut down only once every second year, the inside and outside being cut down alternately, the fence will at all times continue good, and the hedge will remain complete.

WHIP. In the selection of this well-known implement, the pliability of the handle, the secure fastening of the thong, and the clean nature of the whip-cord, are essential requisites.

WHISKERS.—The growth of the whiskers cannot well be accelerated by artificial means, but they may be preserved and kept in order by brushing and occasional oiling. They also require trimming from time to time, to keep them neat.

WHISKY.—A corn spirit agreeing in most of its properties with gin, but somewhat lighter and more stomachic. The peculiar flavour of pottean whisky is supposed to be caused either by the practice of drying the malt from which it is made by turf, or it depends on the nature of the fermentation, and the greater quantity of essential oil produced by low distillation.

WHIST.—One of the great principles in playing this game is, that the players shall observe silence, and pay strict attention to what is going on. Four persons cut for partners; the two highest are against the two lowest. The partners sit opposite to each other, and the person who cuts the lowest card is entitled to the deal. The ace is the lowest in cutting. Each person has a right to shuffle the cards before the deal; but it is usual for the elder hand only, and the dealer after. The pack is then cut by the right-hand adversary, and the dealer distributes the cards one by one to each of the players, beginning with the person who sits on his left hand, until he comes to the last card, which he turns up, being the trump, and leaves on the table till the first trick is played. The person on the left-hand side of the dealer is called the elder, and plays first; whoever wins the trick becomes elder hand, and plays again, and so on, till the cards are played out. No intimations, or signs of any kind, during the play of the cards are permitted between the partners. The mistake of one party is the game of the adversary, except in a revoke, when the partners may inquire if he has any of the suit in his hand. All above six tricks reckon towards the game. The ace, king, queen, and knave of trumps are called honours: and when either of the partners have three separately, or between them, they count two points



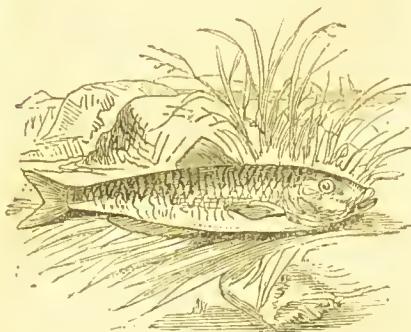
be bruised at one time, as under these circumstances, the mass will heat and ferment, and become unpalatable food. The following is an economical method of cultivating the whin:—Let the farm be enclosed by means of a ditch all round, with a bank thrown up on one side, and if stones can be had, let the face of that bank be lined with stones, from the bottom to near the top,

towards the game; and in case they have four honours, they count four points. The game consists of ten points. Lead from your strong suit, and be cautious how you change suits, and keep a commanding card to bring it in again. Lead through the strong suit and up to the weak, but not in trumps, unless very strong in them. Lead the highest of a sequence; but if you have a quart or ciuque to a king, lead the lowest. Lead through an honour, particularly if the game is much against you. Lead your best trump, if the adversaries be eight, and you have no honour; but not if you have four trumps, unless you have a sequence. Lead a trump if you have four or five, or a strong hand, but not weak. Having ace, king, and two or three small cards, lead ace and king, if weak in trumps, but a small one if strong in them. If you have the last trump, with some winning cards and one losing card only, lead the losing card. Return your partner's lead, not the adversary's; and if you have only three originally, play the best, but you need not return it immediately when you win with a king, queen, or knave, and have only small ones, or when you hold a good sequence, have a strong suit, or have five trumps. Do not lead from ace queen, or ace knave. Do not lead an ace, unless you have a king. Do not lead a thirteenth card, unless trumps be out. Do not trump a thirteenth card, unless you be last player or want the lead. Keep a small card to return your partner's lead. Be cautious in trumping a card when strong in trumps, particularly if you have a strong suit. Having only a few small trumps, make them when you can. If your partner refuses to trump a suit, of which he knows you have not the best, lead your best trump. When you hold all the remaining trumps, play one, and then try to put the lead in your partner's hand. Remember how many of each suit are out, and what is the best card left in each hand. Never force your partner if you are weak in trumps, unless you have a renounce, or want the odd trick. When playing for the odd trick, be cautious of trumping out, especially if your partner be likely to trump a suit; and make all the tricks you can early, and avoid finessing. If you take a trick, and have a sequence, win it with the lowest. The following are the principal *laws of whist*:—If a card be turned up in dealing, the adverse party may call a new deal, unless they have been the cause; then the dealer has the option. If a card be faced in the deal, the dealer must deal again, unless it be the last deal. If any one play with twelve cards, and the rest have thirteen, the deal to stand good, and the player to be punished for each revoke; but, if any have fourteen cards, the deal is lost. The dealer to leave the trump card on the table till his turn to play; after which none may ask what card was turned up, only what is trumps. No person may take up the cards while dealing; if the dealer in that case should miss the deal, to deal again, unless his partner's fault; and if a card be turned up in dealing, no new deal, unless the partner's fault. If the dealer put the

trump card on the rest, with face downwards, he is to lose the deal. *Playing out of turn.* If any person play out of his turn, the adversary may call the card played at any time, if he do not make him revoke; or if either of the adverse party be to lead, may desire his partner to name the suit which must be played. If a person supposes he has won the trick, and leads again before his partner has played, the adversary may oblige his partner to win it, if he can. If a person lead, and his partner play before his turn, the adversary's partner may do the same. If the ace, or any other card of a suit, be led, and any person play out of turn, whether his partner have any of the suit led or not, he is neither to trump it nor win it, provided he do not revoke. *Revoking.* If a revoke happens to be made, the adversaries may add three to their score, or take three tricks from them, or take down three from their score; and, if up, must remain at nine. If any person revoke, and, before the cards be turned, discover it, the adversary may cause the highest or lowest of the suit led, or call the card then played at any time, if it do not cause a revoke. No revoke to be claimed till the trick be turned and quitted, or the party who revoked, or his partner, have played again. If any person claim a revoke, the adverse party are not to mix their cards upon forfeiting the revoke. No revoke can be claimed after the cards are cut for a new deal. *Calling honours.* If any person call, except at the point of eight, the adverse party may consult and have a new deal. After the trump card is turned up, no person may remind his partner to call, on penalty of losing one point. If the trump card be turned up, no honours can be set up unless before claimed, and scoring honours not having them, to be scored against them. If any person call at eight, and be answered, and the opposite parties have thrown down their cards, and it appear, they have not their honour, they may consult, and have a new deal or not. If any person answer without an honour, the adversaries may consult and stand the deal or not. If any person call at eight, after he has played, the adversaries may call a new deal. *Separating and showing the cards.* If any person separate a card from the rest, the adverse party may call it if he name it, but if he call a wrong card, he or his partner are liable for once to have the highest or lowest card called in any suit led during that deal. If any person throw his cards on the table, supposing the game lost, he may not take them up, and the adversaries may call them, provided he do not revoke. If any person be sure of winning every trick in his hand, he may show his cards, but is liable to have them called. *Omitting to play to a trick.* If any person omit to play to a trick, and it appear he has one card more than the rest, it shall be at the option of the adversary to have a new deal. *Respecting who played a particular card.* Each person ought to lay his card before him, and if either of the adversaries mix their cards with his, his partner may demand each person to lay his

card before him, but not to inquire who played any particular card. These laws are agreed to by the best judges.

WHITEBAIT.—A species of herring or sprat. About the end of March or early in April, whitebait begin to make their appearance in the Thames, and are then small,



apparently but just changed from the albuminous state of very young fry. In September, specimens of whitebait, the young fish of the year, may be taken of the length of four or five inches. But they are even then mixed with others of a very small size, as though the roe had continued to be deposited throughout the summer. In their habits, they appear to be similar to the young herring, always keeping in shoals, and swimming occasionally near the surface of the water.

WHITEBAIT, TO DRESS.—Spread a clean napkin upon a table, cover it within half an inch of the edge with a fine sifted flour (say half an inch thick); next sprinkle lightly by small handfuls, about a pint or more of the bait, taking care that it is spread all over the flour, having ready about three pounds of good and sweet lard in a deep frying-pan; let this be getting hot while you proceed as above. Observe carefully when the last vapour rises from the lard, for it then is hot enough. Now hasten to toss the flour and bait together from end to end upon the napkin, have ready a coarse cane sieve, throw the whole into it, sift away the flour quickly, and throw the bait into the hot lard, or rather shake it in by degrees, but quickly, or part will be dressed and the other not, moving the frying-pan backwards and forwards to spread the whole and prevent the fish from adhering, keeping the pan upon the fire. Having a wire slice or ladle ready at hand, apply this cautiously among the fish, and if they sound crisp and hard, remove them quickly into a cullender, drain one minute, sprinkle lightly with fine salt, toss them over and serve upon a dish, with a napkin, instanter. The whole process should not take more than six or seven minutes.

WHITEBAIT, WINTER.—Select sprats of a large size. Shake them in flour to remove the scales, then egg them over with a brush, shake them in equal quantities of flour and bread crumbs, and

fry them in boiling fat for three minutes. Serve them on a napkin, perfectly plain. Brown bread and butter, and a lemon cut into wedges should be placed on table with them, added to which a little cayenne pepper and salt is all that should be taken as sauce to them.

WHITE CAKE.—Take of dried and sifted flour, of fresh butter, and of finely powdered loaf sugar, one pound each; five well-heated eggs, a quarter of a pint of cream, of candied orange and lemon peel, cut small, three quarters of an ounce each, one ounce of caraway seeds, half a grated nutmeg, a glass of brandy, and a little rose water; then beat the butter to a cream, and add all the ingredients to it; and finally mix in one tablespoonful of fresh yeast; let the cake rise before the fire for half an hour. Bake it in a buttered tin. Instantly upon taking it out of the oven, with a feather brush the top all over with the beaten white of an egg, and then sift loaf sugar upon it. Let it stand at the mouth of the oven to harden.

WHITE FLOUR.—Flour, 1lb.; butter, 1lb.; sugar, 1lb.; eggs, 5; cream, $\frac{1}{2}$ pint; candied orange and lemon-peel, 4ozs. each; caraway seeds, 1oz.; nutmeg, $\frac{1}{2}$ of 1; brandy, 1 wineglassful; rose-water, sufficient; yeast, 1 tablespoonful.

WHITE CUSTARDS.—Boil a pint of cream with a blade of mace, let it simmer for about five minutes, then take it off the fire and add three ounces of sugar, beat the whites of four eggs to a complete froth, put them into the cream, set it on the fire again, and let it boil gently, stirring constantly till it becomes thick, take it off the fire, add a tablespoonful of orange-flower water. Serve in custard glasses.

WHITE CREAM.—Cream, 1 pint; mace, 1 blade; sugar, 3ozs.; eggs, 4 whites; orange-flower water, 1 tablespoonful.

WHITE PAINT.—A paint which will dry in about four hours, and leave no smell, may be compounded as follows:—Take a gallon of spirits of turpentine, and two pounds of frankincense; let them simmer over a clear fire till dissolved, then strain and bottle the mixture. To a quart of this, add a gallon of bleached linseed oil, shake these well together, and bottle them likewise. Grind any quantity of white lead very fine with spirits of turpentine, then add a sufficient quantity of the last mixture to it, till it is fit for laying on. If it becomes thick in working it must be thinned with spirits of turpentine.

WHITE POT.—Mix three pints of milk, half a pint of spring water, five eggs well beaten, three ounces of butter, a French roll sliced, white sugar and nutmeg to the taste. Bake it in a bowl two hours in a quick oven.

WHITE PUDDINGS.—To two parts of beef-suet chopped, add one part of oatmeal previously toasted before the fire; boil an onion or two, and chop them with pepper and salt; mix the whole well together, put the ingredients into skins, and boil them for an hour, pricking them as they boil, to prevent their bursting. They will keep for

some time in brau after they have been allowed to become cold. Parboil when wanted, and then broil them on a gridiron. The quantity of suet may seem disproportioned to the oatmeal; but unless there are two-thirds of the former to one of the latter, the puddings will be dry and tasteless. They require to be highly seasoned with pepper and onions.

WHITE SAUCE.—Boil a stick of celery and a bunch of parsley, in a pint of milk, adding white pepper and a little salt, then put two ounces of butter into a saucepan, let it melt, add to it an onion sliced thin, dredge in flour until it is a paste, but do not let it brown. Strain the milk, and add it by degrees to the butter and flour, stirring all the time, and boiling it until it is quite thick and smooth; pass it through a fine sieve or tammy. If wanted to be very rich, let it cool a little, and then add an egg, previously beaten, and mix very gradually, warm it over the fire, stirring it well, but do not let it boil, or it will curdle.

WHITE SOUP.—Put into a clean saucepan two or three quarts of water, the crumb of a two-penny loaf, with a bundle of sweet herbs, some whole pepper, two or three cloves, an onion or two cut across, and a little salt; let it boil covered till it is quite smooth; take celery, endive, and lettuce, only the white part, cut them into pieces not too small; boil them, strain the soup off into a clean stewpan; put in the herbs, with a good piece of butter stirred into it till it is melted; then let it boil for some time till it is very smooth; if any scum arises, take it off very clean. Soak a small French roll, nicely rasped, in some of the soup, and send it to table.

WHITE SWELLING.—This is a popular name for a peculiar diseased condition of the ligaments, and bones of the knee-joint, causing it to swell and assume a white, shining, inelastic appearance—a form, however, it only assumes in the early stage of the disease. White swelling is, in fact, a very serious condition of scrofula, in which that disease puts on a local character, demanding the utmost vigilance of the surgeon, who has little chance of curing it but by an operation.—See SCROFULA.

WHITE-WASHING.—The act of cleansing ceilings and walls with a solution of lime in water, to which a portion of size is generally added. The practice of whitewashing apartments, eminently contributes to the preservation of health, hence it is an operation which should be performed periodically, and never less frequently than once a year. It is to be observed that the hot or quick lime is the best for this process, and should be employed as soon as possible after it is slaked; for in this condition it is more effective in destroying vermin, and removing infection.

WHITE WINE WHEY.—Put half a pint of new milk on the fire; the moment it boils up, pour in as much sound raisin wine as will completely turn it, and make it look clear; let it boil up, then set the saucepan aside till the curd subsides, and do not stir it. Pour the whey off, and add to it half a

pint of boiling water, and a bit of white sugar. Thus you will have a whey perfectly clear of milky particles, and as weak as you choose to make it.

WHITING.—A well-known fish belonging to the cod tribe, and valuable on account of its delicacy and lightness as an article of food. It does not usually exceed a pound and a half in weight. It abounds on all British coasts, and comes in large shoals towards the shore in January and February, for the purpose of depositing its spawn. It is easily distinguished from the haddock by the absence of the barbule on the chin, and from the pollack and coal-fish by having the under-jaw shorter than the upper, and the tail even at the end.

WHITING BAKED.—Open the fish only so much as will permit of their being emptied and perfectly cleansed. Wash and wipe them dry, then fold them in a soft cloth, and let them remain in it awhile; replace the roes, and put the fish into a baking-dish of suitable size, with a tablespoonful of wine, a few drops of chili vinegar, a little salt and cayenne, and about half an ounce of butter, well blended, with a saltspoonful of flour for each fish. They must be turned round with the heads and tails towards each other, that they may lie compactly in the dish; and the backs should be placed downwards, that the sauce may surround the thickest part of the flesh. Lay two buttered papers over, and press them down upon them; set the dish into a gentle oven for twenty minutes, take off the papers, and send the fish to table in their sauce. Port wine is always used for the sauce; a seasoning of chili vinegar, cayenne, and pounded rice, is added, but sherry, bucelas, or any other dry wine can be used instead. It is an advantage to take off the heads of the fish before they are dressed, and they may then be entirely emptied without being opened. When preferred so, they can be re-dished for table, and the sauce poured over them. The dish in which they are baked should be buttered before they are laid in.

WHITING BOILED.—Having scraped, cleansed, and wiped them, lay them on a fish-plate, and put them into water at the point of boiling; throw in a handful of salt, two bay-leaves, and plenty of parsley, well washed and tied together; let the fish just simmer from five to ten minutes, and watch them closely, that they may not be over-done. Scrape parsley and butter with them, and use, in making it, the liquor in which the whittings have been boiled, just simmered from five to ten minutes.

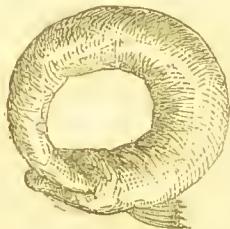
WHITING BROILED.—Clean and wash the fish, dry them in a cloth, and rub a little vinegar over them, which will prevent the skin from breaking. Dredge them with flour, rub a gridiron with beef suet, and heat it previously to putting on the fish. While broiling, turn them two or three times. Serve them with plain melted butter or shrimp sauce.

WHITING DRIED.—Choose them of two or three pounds weight; take out the gills, eyes, and entrails, and remove the

blood from the back-bone; wipe them dry, and put some salt into the bodies and eyes; lay them on a board for a night, then hang them up in a dry place, and, after three or four days, they will be fit to dress. Skin and rub them with egg, and strew crumbs of bread over them; lay them before the fire, and baste with butter until brown enough. Serve with egg sauce.

WHITING, FILLETS.—Empty and wash thoroughly, but do not skin the fish; take off the flesh on both sides close to the bones, passing the knife from the tail to the head; divide each side in two, trim the fillets into good shape, and fold them in a cloth, that the moisture may be well absorbed from them; dip them into, or draw them through, some beaten egg, then dip them into fine crumbs mixed with a small portion of flour, and fry them a fine light brown in lard or clarified butter; drain them well, press them in white blotting-paper, dish them one over the other in a circle, and send the usual sauce to table with them. The fillets may also be broiled after being dipped into egg seasoned with salt and pepper, then into crumbs of bread, next into clarified butter, and a second time into the bread crumbs (or, to shorten the process, a portion of clarified butter may be mixed with the egg at first), and served with good melted butter, or thickened veal-gravy, seasoned with cayenne, lemon-juice, and chopped parsley. Five minutes will fry the fillets, even when very large; rather more time will be required to broil them.

WHITING FRIED.—Clean, skin, and dry them thoroughly in a cloth, fasten their tails to their mouths, brush, slightly, beaten eggs equally over them, and cover them with the finest bread crumbs mixed with a



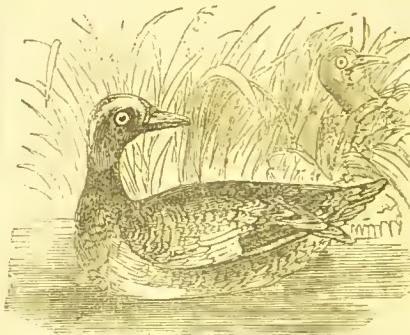
little flour; fry them a clear golden brown in plenty of boiling lard, drain and dry them well, dish them on a hot napkin, and serve them with good melted butter, or with well-made shrimp or anchovy sauce. A small half-teaspoonful of salt should be beaten up with the eggs used in preparing the whittings: two will be sufficient for half a dozen fish. Fry from five to eight minutes, according to their size.

WHITING, TO CARVE.—Whiting are usually fried and curled. They should be cut in half down the back, and served. The shoulder part is the best.

WHITLOW.—Whitlows are very painful, deep-seated abscesses, in general confined to the fingers, and usually the last joints of

the fingers. The distinctive feature of whitlow is that, unlike other suppurations, the matter forms deep, under the fascia and muscles, and often in the sheath of the tendon that moves the fingers. From this cause, the unresisting nature of the part, and the difficulty of the pus or matter reaching the surface, the pain is very protracted and intense, attended with a dry burning heat, and pulsating throbs of acute anguish. As these symptoms, with great tenderness, and pain of the surrounding parts, continue long before the matter shows on the surface, the best course to pursue, after having poulticed well with bran, is to cover the extremity or tender part of the finger with a good rubbing of lunar caustic, and renew the poultices; repeating the caustic, if necessary, till the abscess is fit to open, when it should be lanced freely, encouraging the after-discharge by hot linseed-meal poultices.

WIDGEON.—A species of migratory birds, bred in the morasses of the north, which they quit on the approach of winter, and, as they advance towards the end of their southern journey, they spread themselves along the shores, and over the marshes and lakes in various parts of the continent, as well as those of the British Isles. They are easily domesticated in places where there is plenty of water, and are much admired for their beauty and sprightliness. The female is of a sober brown, the fore part of the neck and breast paler. The young of both sexes are grey, and continue so till February, when the plumage of the male begins gradually to



assume its rich colourings; but after the month of July the feathers become dark and grey, so that he is hardly distinguishable from his mate.

WIDGEON, TO DRESS.—These birds are roasted like common ducks, but without stuffing, and with a rather less allowance of time for cooking. Before carving, the knife is drawn along the breast in the situation of the slices; and upon these a lemon is squeezed, and a little cayenne pepper is sprinkled. They require a made gravy, with port wine.

WIDOW, LEGAL RIGHTS AND RESPONSIBILITIES OF.—A widow is entitled absolutely to one-third of the deceased husband's personal estate, which will pass to any

future husband she may marry; and the children will be entitled to the remaining two-thirds of such property, or which the widow, as the administratrix of the husband, will be entitled to the legal interest as trustee for her children. When a husband dies intestate, and without children, one-half of the personal property goes to the widow. A widow is always entitled to letters of administration to her deceased husband's personal effects, which will give her absolute and sole control over the same; but when she has possessed herself of her deceased husband's effects, and administered to the estate, she may be at once sued for the recovery of any debt due from the deceased.

WIDOWS, CHARITIES FOR.—There exist various asylums and other charities for the relief and assistance of widows. Sometimes these take a parochial form, and are specially meant for the widows of householders in particular parishes, the control thereof being vested in the churchwardens. There are also pension charities for widows who are above the age of fifty or sixty.

WIFE, LEGAL POSITION OF.—A wife can, under no circumstances, be made liable for her husband's debts, although he may have gone abroad, but all his available property in this country may be seized to discharge such debts. The wife of a convicted felon cannot re-marry. The transportation of the husband will not justify the wife in marrying again during his lifetime, the conviction and sentence of the husband not operating as a dissolution of the marriage. A wife is competent and compellable to give evidence for or against her husband in legal proceedings, where either is party to a suit; but in any criminal proceeding, the wife is not competent or compellable to give evidence. A wife may make a will without her husband's consent, but only under what is called a power of appointment, that is, an authority in some instrument by which she is possessed of the control of property in her own right.—See **HUSBAND AND WIFE**.

WIG.—An article made to represent the natural head of hair. A very great improvement has taken place in the construction of wigs, of late years, and they may now be obtained in close resemblance to the natural covering of the head. In choosing a wig, attention should be paid to the cast of the features, complexion, &c. Respect should also be had to age, as it would be a manifest absurdity for a person bordering on three-score and ten, to wear a head of hair such as is usually displayed in youth. Dark-complexioned persons should also wear dark-coloured wigs, and light-complexioned persons light ones.

WILD DUCK SHOOTING.—This may be considered legitimate sporting as soon as the young ducks take wing, which occurs towards the middle of August, until which time they are not worth shooting, for edible purposes, unless they be the produce of a very early batch. To ensure good sport, the best plan is to walk in a very deliberate manner along the side of a brook or rivulet. If it be not too deep, the chances of success

will be increased by walking up the brook itself, in company with one or more well-broken water-spaniels, which, if mute, so much the better. The fens of Lincolnshire, Cambridge, and Martin Mere, in Lancashire, are excellent localities for wild fowl shooting.

WILD FOWL.—These include birds of the goose and the duck species. Wild geese, when on the wing, may be distinguished by always forming a figure in their flight. In their winter visits to us, they feed on the coast, and often enter inland to seek for such grasses as suit them; more particularly they are fond of green wheat. The wild duck is rather smaller than the tame duck, but its plumage is nearly the same. The wild mallard, or drake, weighs usually about two pounds and a half or three pounds. The bill is yellow; the head and upper part of the neck are ornamented by a deep glossy green, terminating in a white ring. The female is less in size, and not distinguished by any splendour in the colours of her plumage. The parent birds pair in the spring, and the hens incubate in some slight shelter, and lay from ten to fourteen eggs, which they sit on for about thirty days.

WILD FOWL SAUCE.—Simmer a tea-cupful of port wine, the same quantity of good gravy, a little shallot, pepper, salt, nutmeg, and mace, for ten minutes; put in a bit of butter and flour, give it all one boil, and pour it over the birds.

WILD FOWL, TO DRESS.—Half-roast them; when they come to table, slice the toast, previously prepared, strew on pepper and salt, pour on a little port wine, and squeeze the juice of a lemon over; put some gravy to this, set the plate on a lamp, cut up the bird, let it remain over the lamp till done, turning it.

WILL, DIRECTIONS FOR MAKING.—Every person who has attained the age of twenty-one years, and is his own master, is qualified to make a will. Anything may be bequeathed by will that is at the disposal of the testator. Although there is no peculiar form of will, it is nevertheless unwise for a person to make one without professional assistance. A person may sit down to make his will, with his intentions perfectly clear in his own mind as to the disposal of his property, but which, owing to the merest literal omission, may be rendered not only obscure in its meaning, but even capable of being totally misinterpreted. The cost of drawing up a will is but small, and, therefore, ought not to be begrimed by those who wish to be assured that their intentions may be strictly carried out. A will must be in writing, and signed at the foot or the end thereof by the testator, or by some other person in his presence by his direction; and such signature must be made or acknowledged by the testator, in the presence of two or more witnesses present at the same time, and such witnesses must attest and subscribe the will in the presence of the testator, but no attestation clause is now necessary. The rule that every will must be signed at the foot or the end thereof, appears to be a very simple one, but numbers of wills have been set aside on the

ground that this rule had not been strictly complied with. No disposition or direction following the signature, or below it, or inserted after it has been made, will be operative; and all alterations and interlineations in the body of a will, should be signed in the margin with the initials of the testator, or noticed in the attestation, so as to show that they were made before the signing. If an addition is necessary after the signing and attestation, it must be re-signed and re-attested. An attesting witness may sign the will for the testator by his direction, and where a party so acting signed his own name, but expressed it to be on behalf of the testator, the will was held to be valid. A testator may sign by a mark, and it forms no objection to such a mode of signature, that he is able to write his name. The signature must be made or acknowledged in the presence of witnesses. If it has been affixed in their absence, it is a sufficient acknowledgement, if the testator produce the paper to them as his will, so that they can see that it is signed. Two attesting witnesses are sufficient. The signature of the attesting witnesses must be made in the presence of the testator, which means in a place where, if he looked towards it, he could see them sign; they need not be in the same room or house with him; if he can see them in the act of signing through a window, it is sufficient. If they are in the same room with him, but in such a position as to make it physically impossible that he see them sign, it is insufficient. Every person should execute a will as soon as he is in the possession, however small it may be; in such a juncture, a properly qualified lawyer should be called in, your intentions divulged to him, and he will give proper expression to your wishes. Then, when the instrument is sent home to you, execute and have it attested as previously directed, and all will be well. It will frequently happen that a testator having executed his will, desires to modify its provisions, revoking former gifts, and selecting other objects of his favour. The better way is to make a new will altogether, if the modifications are numerous or complex. Often, however, this may be, and very frequently is effected by a codicil, which is a testamentary paper, as its name implies, of a smaller character than a will. It must, however, be signed and attested with the same solemnities, and when executed, will be read together with the will as one instrument. When a testator, at various periods of his life, has executed several testamentary papers, each purporting to be the last will, that one which was executed most proximately to his decease, will be admitted to probate, and acted upon. It is, therefore, important that a will should be accurately dated with the day, month, and year of its execution. A testator may, however, make several wills, each disposing of different property, and they will all stand together as a single will. If a testator who has made one will, execute a paper duly attested, expressly revoking that will and saying no more, he destroys it as completely as though it had been con-

sumed by fire; and should he make no further disposition of his property, he will die intestate. But if he has made two or more wills, and revokes the last, the last but one is thereby revived exactly as it stood.

WILL, DIRECTIONS FOR PROVING.—The will of every deceased person is to be proved in that court within the jurisdiction of which he shall have died, being possessed of personal property of the value of £5; but if he shall have died possessed of personal property within more than one jurisdiction, or have died in one diocese, leaving personal estate in another, the will must be proved in the prerogative court of the province within which the several jurisdictions are situated. Thus, if part of the property should be in Surrey, within the diocese of the Bishop of Winchester, and the jurisdiction of his consistorial court, or any inferior court in his diocese, and partly in London, within the diocese of the Bishop of London, the will is not to be proved in either of the courts of the Bishops of Winchester or London, but in the prerogative court of the Archbishop of Canterbury at Doctors' Commons, both the dioceses of Winchester and London being within the province of Canterbury. But, if some part of a testator's personal property lie in the province of Canterbury, and another part in the province of York, the will must be proved in both provinces, though not necessarily in the prerogative court of each province; for if the property in each province should be entirely within one jurisdiction, the probate in each case must be taken out in the court to which the jurisdiction belongs. An executor should have a general knowledge of these matters, in order, that if he do not at once satisfy himself of the court in which the will is proved, he may be aware of the difficulty when it occurs, and know whom to consult upon the point, and likewise be able to collect the information necessary for forming a correct opinion. It, however, after obtaining the best advice within his reach, the executor should still entertain a doubt whether the will should be proved in the prerogative court, or any inferior court, he should decide in favour of a probate from the prerogative court. For even if the deceased had not properly in several inferior jurisdictions, a probate from the prerogative court is not void, but only liable to be made so; while a probate taken out improperly in an inferior court is absolutely void. What sort of things, being the property of the deceased, shall be accounted "notable goods," for the purpose of founding the jurisdiction of the courts with respect to probate, is a question of much nicety. Household furniture, and all other articles in and about a dwellinghouse, warehouse, or manufactory; stock in trade, and cash, are property in the place in which they happen to be at the testator's death. A policy of insurance or a debt on bond is property where the policy or bond happens to be deposited. A debt or mortgage is property where the mortgage deed is situated. Simple contract debts (among which are included bills of exchange

and cash at a banker's) are property where the debtors reside. Judgments, statutes, recognizances, are property where they have been given or acknowledged. Leases for years are property where the land is, and not where the lease happens to be. Shares in canals and railways running through several dioceses, are property in the diocese where the office stands for transferring the shares and paying the dividends. If the deceased shall have died on a journey, the property about him, if his death shall have happened within the jurisdiction of a different court from that which possesses authority over the place where all the rest of his goods are, will not render it necessary to take out probate in the prerogative court, as it would have done in any other case than that of his dying on a journey. Having collected full information of the extent and value of the deceased's personal property, and decided on the court in which application for probate is to be made, the executor's next step is to apply to a proctor of the court, if the will is to be proved in either of the prerogative courts, or to the registrar or deputy registrar, or other acting officer, if it be in any of the inferior courts, and if the executor live near it; but if he live at a distance, he may do the business through the medium of the nearest surrogate of the court. It is not necessary that the executor should previously make himself acquainted with all the forms of proceeding in the court, with respect to granting the probate. But he should take especial care to have his stamped probate delivered to him within a few weeks from the date of his affidavit. He is required to swear to the gross value of the personal estate without any deduction for debts; and in the estimate, he must not fail to include the following descriptions of property:—Leasehold estates for years, or leaseholds for lives, if they should be applicable by law as personal estate; or copyholds, if by the custom of the manor they descend to the executor, and are assets in his hands. In the case of a partnership, the executor is not to include the whole gross amount of the testator's share of the partnership property, but must obtain from the surviving partners a balance-sheet exhibiting both the property and the liabilities of the firm; and the sum to be included in the estimate of the testator's property will be his share of the net balance only. Articles which fall under the denomination of fixtures, if attached to real estate, whether house or land, are commonly accounted as part of the real estate, and therefore to be excluded from the estimate. The executor's right to such articles will, in some measure, depend on the question whether his testator was the tenant in fee, or the tenant for life only in the real estate. Property of which the testator was only a trustee, must, of course, be left out, unless such property shall have been so mixed up with the testator's own estate, that no particular part can be said to be the trust fund. In this case no deduction of the trust money must be made in the first instance, the deceased being merely a debtor to the object of the trust; but a proportionate return of

duty may be claimed when the trust debt shall have been paid. Where the trust fund has been kept separate, and it is consequently left out of the estimate as above directed, the executor will obtain a transfer of it by making an affidavit of the facts. Every executor is bound to exhibit, when called on, a full and perfect inventory and valuation of the testator's effects, in the court in which the probate is granted; and though he may never be called upon to do so, the executor should not neglect to make such an inventory, and preserve it, in order that he may be able to answer any call upon him for an account in whichever court it may be made. The property is to be valued at the time of taking out the probate; and all rents, interest, and dividends accrued between the death of the testator and that time, must be included in the estimate.—See EXECUTOR, PROBATE, &c.

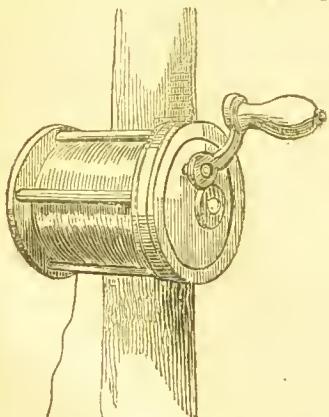
WILLOW TREE. — The cultivation of willows for useful purposes, is on the whole profitable, and the growth of rods particularly so; the returns are certainly quicker than those derivable from any other wood, and, proportioning them with the management and demand, seem at least equal in amount. The ground most suited to the formation of osier beds, as they are called, is found on the margins of streams; it should be of considerable depth, and partake largely of a loamy character. Gravelly beds or banks entirely of an argillaceous nature are not fitting. The land should be sufficiently high to prevent more than an occasional submersion; for though all willows thrive in damp soils, few of them are naturally bog, or even marsh plants, and never succeed when frequently saturated. The preparation of the ground is confined to a deep summer treiching, to destroy weeds and pulverise it. As it is usual to plant only cuttings, this operation had better be deferred till spring, when pieces of about two feet in length, taken from the bottom of the strongest recently cut rods, may be thrust into the ground for about half their length at distances of about a yard from each other; their subsequent management through the summer being merely an occasional hoeing to remove weeds, though at the beginning it will be well to look over them and replace any that have failed. The produce of the first year will, of course, be small, but the rods must be cut to within three joints or buds of their origin. The most proper time for cutting, is as soon as the leaves have fallen, because the remaining buds have then time to consolidate, and are better prepared to meet the winter; and though for convenience the rods are sometimes allowed to stand all the winter, it may be observed the shoots that have been cut over in autumn, always break in the succeeding spring with the greatest vigour. With regard to the planting of willows, nothing can be more easy. They may be increased to almost any extent by cutting in the manner before described for osiers. Their after-management must of course depend upon the uses they are destined for. The very common

mode of pollarding them is objectionable on several accounts; they are then spoiled either for timber or poles; the crowd of small stuff which rises on the head after each cutting suffocates one the other, and the trunk is rendered of little value by its being foreshortened. It must be decidedly more profitable, either to cut them over near the ground, as is practised with shoots of ash, chestnut, and other coppice wood; the subsequent shoots to be thinned according to the strength of the shoot and the space they are allowed to occupy, or at once to let them run up into perfect trees, taking only such lateral branches as may be required for repairs, &c., before the principal growths have attained a marketable size.

WILSON'S LOAN FUND.—This fund is devoted to the assistance of young beginners in trade in the City of London; and sums of not less than £100 are lent. The borrower must have been in business one year, must be able to pay all he owes, and find three or four sureties for the repayment of the loan, each of these sureties having to furnish references of their respectability.—See **LOAN**.

WILTSHIRE PUDDING.—Mix with three well-beaten eggs a pint of milk, as much flour as will make it a thick batter, and a little salt; beat for some minutes, stir in gently a large teacupful of picked red currants and half the quantity of fresh raspberries, boil it in a cloth for two hours, turn it out upon the dish it is to be served in. Cut it into slices about three-quarters of an inch thick, but do not separate them; put between each a thin slice of butter and some brown sugar, and serve it hot, with pudding sauce in a sauce tureen. It is very good without the raspberries.

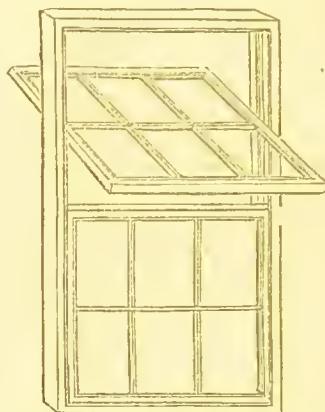
WINCH.—In angling, an apparatus almost indispensable to anglers on every occasion. In very fine fishing for dace, roach, &c., it is sometimes dispensed with. But in ordinary cases, the angler can never ensure himself against hooking a fish of which he did not meditate the capture, and which, without a winch, he has no means of taking. As



under such circumstances, the non-expectation of such a visitor would heighten the

pleasure of his appearance, so the disappointment would be doubly mortifying if, instead of being a gainer, the angler found himself minus hook, line, and perhaps float. It is wise, therefore to be always provided with a winch and a running line, so that the disappointments alluded to may be avoided.

WINDOW.—In the construction of windows several improvements have taken place of late years. A kind of window which may be readily cleaned, and is not likely to cause accidents, is shown in the engraving.



In appearance, the sashes resemble those of the common window, and the upper and lower sash may be moved up and down in a similar manner. The outside of the sash may also be turned into the room, so that it may be easily painted, glazed, or cleaned, by a person standing within the room, without the necessity of removing the slips or beadings. The frame of the window is fitted with grooves, weights, and pulleys, in the usual manner, the fillets on the sash are not made in the same piece with the sash frame, but fastened to it by pivots, about the middle of the sash; upon these pivots the sash revolves at pleasure, so as to enable the outside to be reached without disturbing the fillets or grooves. When the sash is placed vertically, as the lower one in the figure, a spring catch on each side, shoots into and takes hold of the sliding fillets, so that in this case the sash slides up or down in the usual manner, but can be immediately released and turned inside out by pushing back the springs, and at the same time pulling the sash inwards.

WINDOW GARDENING.—In considering the culture and treatment of plants adapted for windows, it should be observed that the sort of plants most suitable will, in a great measure depend on the aspect and even the form of the window; also its liability to, or exemption from exposure to chilling draughts of air, and likewise on the possession or non-possession of a piece of ground, to which the florist can transfer his potted plants from the window when he

pleases, so as to ensure continued successions within doors. Any one who has a parlour or drawing-room with a bow window on the south side of the house, is almost in the favourable position of a person who has a green-house; he can regulate the temperature of the room; and as his window admits the rays of the sun, from early in the morning until night, and yet can be shaded by a blind at will, he can cultivate a great variety of tender green-house plants without any difficulty. Among the plants suitable for windows are some of the bulbous order, which blow early, and are easily cultivated, such as the snowdrop, spring-crocus, early tulip, hyacinth, jonquil, and narcissus. These, after flowering, should make way for others. It must be borne in mind, however, that the odours of flowers are very injurious to health, if the plants are confined with us in closed rooms. During the night, plants generally give out a gas, which is especially hurtful to human beings in a sleeping apartment of which the door and window are closed. The effluvium, also, which sometimes arises from our bodies during sleep, has an unhealthy effect on the plants, besides the injury they suffer from having light altogether kept out at night by a shutter or window-curtain. In this unnatural state, plants cannot thrive; therefore, if they are to have places in bed-rooms, they should only have outside ones, which will suit them well in mild weather. Indeed, in all cases, it will be found that, for window-culture, plants in moderate weather will thrive better on the outer than the inner ledge of the window, or on a stage within a room during the night, when air, light, and moisture, will be as necessary to them as in the day-time. The plants to replace bulbs, may consist of the double primrose, hepatica, anemone, ranunculus, tuberose, and candytuft. The last-named plants should be removed to outside quarters when they cease to please the eye or regale the senses, and give place to the more valued geraniums, fuchsias, perpetual roses, and sweet-scented myrtle, which will blow the greater part of the year. These plants need not be displaced at any time from the window—except to receive genial showers out of doors—as they are always ornamental and never lose their foliage: if, however, there be a convenient place for them outside the house, their temporary removal there will invigorate them, unless in cold weather, and their place can be advantageously occupied by other plants. Carnations, picotees, ten-week stocks, double wall-flower, and Chinese rose, are desirable summer plants and may be surrounded by the autumn-blown campanula, petunia, verbena, calceolaria, and Chinesc chrysanthemum. The cultivation of window plants must be guided altogether by a person's extent of space within and without: if he cannot shift his plants, when out of bloom, he must be content to keep such plants as the fuchsia or the geranium and those roses which preserve their bloom longest and afford the greatest ornament. In cottages, however, above the lowest order, there are usually windows enough to accommodate

all the kinds of plants before named, so as to keep up continued successions, more especially as the bulbous sorts will want no pot nor need any care; when their season has passed, they may make room for others. Even a window on a north side of a lattice will serve at all times for saxifrage, the musk plant, winter phlox, purple cytisus, and hounds'-tongue. A north window, also, will be useful in summer to preserve the bloom of the tender plants longer than would be the case if they were exposed to the stimulating effects of the sun. In no circumstances of aspect, then, is a person debarred from cultivating window plants; in any point of the compass there will be either sun or light sufficient for some sorts of beautiful and interesting flowers; and there is no month in the year in which sweet flowers or green foliage may not gladden the eyes of any person who has the command of a window. Some instructions are necessary as to the soil that should be provided for plants, and the mode of potting them. Plants cannot be cultivated in pots with complete success unless the soil in which they are put is suitable to their nature, and contains a considerable proportion of nourishment, as the quantity of mould in a pot is necessarily very small, and the plant in it cannot extend its roots in search of food as it does in open ground culture. It is not only necessary that the plant should have the proper kind of soil, but also that this be duly prepared before it is used, by repeatedly turning it, so that the whole shall be thoroughly and frequently exposed to the air, and the separate parts of which it is composed perfectly blended together. This work should be done in some place where the mould will not be exposed to heavy rains. The seasons for doing this are the autumn, winter, and early spring months. Summer is not the proper period for this operation, because the heat of the season would dissipate some of the most active properties of the compost. A soil suitable for pot plants generally is a good sound loam or garden mould, completely rotted manure, leaf mould or leaf earth, silver sand or drift sand blended together; for some plants, the pink tribe especially, old mortar rubbish: and for other plants, as heaths, or peat earth. The next thing to be considered, both in order and importance, is the potting of plants. If the plant requires to be repotted, the mould in the pot in which the plant is, must be in a dry state, and therefore can be very easily removed. Give the pot two or three smart blows with the palm of the hand, on every side, to loosen the earth from the inside; then spread out your fingers around the stem of the plant, turn the pot bottom upwards, and the plant, with the roots and mould undisturbed, will fall into your hand. Previous to doing this, however, the pot into which the plant is about to be transferred should be prepared, quite clean, and otherwise ready; its drainage should not only be perfect when the plant is moved into it, but should be so managed as to continue as long as possible, for the plant will speedily sustain injury

when the drainage becomes obstructed; and if this be not attended to, the plant will be seriously damaged, if not ultimately destroyed. The best plan of drainage is formed of two pieces of tile, with the edge of each piece straight on one side; these two straight edges should be placed in contact over the middle of the hole at the bottom of the pot; immediately over these pieces of tile, where they meet, there should be placed an under oyster-shell with the hollow side downwards; around and over these should be put bits of broken potsherds, the larger pieces below, and the smaller above; over these, some broken and partially rotted pieces of wood, such as may be found at the bottom of an old wood-stack; over these some broken dried leaves, or rough fibrous peat; next to this the coarsest mould, then a little of the finer mould. This will fill up a third part of the pot. When the plant is being re-potted, the roots, if they be found matted round the ball of earth, should be carefully drawn out by a smooth pointed stick, and freely cut back up to the larger roots, taking care not to injure them. If the ball of mould be hard, it should be loosened by cautiously pressing it between the fingers and the thumb. These roots must be placed regularly in the pot, and the prepared mould strewed in amongst them, and pushed down gently where it may be necessary with the stick, the sides of the pot being occasionally patted to get the soil more completely among the roots and the loosened ball of earth. Care should be taken to place the plant perfectly upright, and the stem exactly in the middle. The plant should be put at the same depth in the new pot as it was in the former one. If the roots be perfectly covered after the settling of the mould in the pot, the plant is sufficiently deep. Having thus filled up with mould, press it down equally over the whole surface with moderate firmness, then moisten the mould thoroughly and gradually through the fine rose of a water-pot, with some rain-water raised a little above the temperature of the atmosphere, either by exposing it for some time to the rays of the sun, or by mixing a little hot water with the cold. This finishes the potting. The plant should now be put in a sheltered situation, where it will be safe from the extremes of heat and cold, until it has recovered the effects of the operation. The plant may now be left out of doors, if the weather be mild and not windy, or put under shelter where the air circulates freely until the leaves become perfectly dry. Whether the washing be given or not to the plants, they must be examined before they are placed in the window, to see where it requires pruning or disbudding, to regulate its growth, and clear it from insects. In pruning, remove those buds which are growing where shoots are not wanted; cut away the worst placed branches where they are crowded or crossing each other; cut back or shorten such shoots as are disproportionately strong to those growing at the same joint on the opposite side of the branch, so that the two

shoots may be brought to an equal growth. In shortening the branch, the situation of the buds must be considered just below where the cut is to be made; this should be so made, that when the buds grow to branches, they will fill up various spaces, and thus perfect the form of the plant. An examination of the leaves must then be made, to see if there are any green flies upon them. If only a few of the leaves are affected by them, the flies may be easily destroyed by pressure of the finger and thumb, but when they exist in considerable numbers, the plant must be fumigated with tobacco smoke. This should be repeated three times, at intervals of three or four days, the foliage being washed each time, in the way before described, on the day after fumigation. Or, the branches affected by the flies, may be dipped in strong tobacco water, instead of fumigating the plants. In course of time, the cultivator of window flowers will be repaid for his care by a beautiful array of geraniums, Chinese roses, ten-week stocks, wall-flowers, heliotropes, carnations, pinks, and mignonette. Of the last-named plant, there is a superior variety, which, being longer lived, and more strongly scented than the common sort, is especially desirable for the window stand. Fuchsias and geraniums continue sometimes so long in flower, that they should have the first claim to standing room in any house where growing flowers are kept. In summer, fuchsias should be transferred to the outside of the window-sill or to a balcony, where they will continue to bloom until the frost nips them; and in order that they may not suffer from lack of moisture, the strong healthy plants should be potted in six-inch pots in a light rich soil, and these pots dropped into others just large enough to admit the space of about half an inch all round, the inserted pot standing in moss or leaf-mould, until its rim is on a level with that of the pot containing it. By this contrivance, the hottest sun will be unable to scorch the roots of the plants; they will retain moisture longer, and will flourish more luxuriantly. All hardy woody window plants should be kept in due form and vigour by stopping the buds, rather than by pruning after shoots have struck out, as the strength of the plant will be better preserved by the nipping of vegetation in its first stage, than by allowing it to grow at all. Watering should be carefully attended to. When plants are watered from a watering-pot, a sufficiency of water should be given to soak the roots completely. In the case of newly-potted plants, however, a second supply of water should be withheld until the first has been thoroughly absorbed; for the roots of plants not yet established are able to imbibe moisture in but a trifling degree, therefore, the moisture not taken up by the plants, would harden the soil into a dry crust. Whenever the soil is in such a condition, it should be loosened with a convenient instrument, and a supply of suitable mould should be always ready to top dress the sinking earth in a pot, in order that fresh nourishment should be filtered

down to the roots, in place of that which they have consumed. Carnations, and all their tribe should be carefully treated as to striking, the petals being supported either by tying the flower-stems to a stake, or by supporting them with slip cards fixed beneath them, and fastened to the stake by worsted or strips of bass matting. These

inches long, with holes for screwing the frame to the window sill; also bars of thin iron; and a curved bar of wood into which the wire is inserted; the whole finished off by a wire fence. This may be constructed of wood or iron, screwed into the sill, and painted green. Green-coloured pots are more appropriate and pleasing to the eye than red ones. Covering the surface mound in the pot with loose and moist moss, is both tasteful and beneficial to the plant, by preventing the evaporation of the moisture from the earth by which it is surrounded and fed. The ordinary mode of window-gardening is illustrated in figs. 1 and 2. The Belgian window garden furnishes one of the best modes of this kind of culture. It is within reach of all, and will be understood by referring to the annexed engraving. In fig. 3 it will be seen that the sill of the window is extended in breadth beyond the face of the wall of the house by brackets; two or more shelves are placed across the window, which

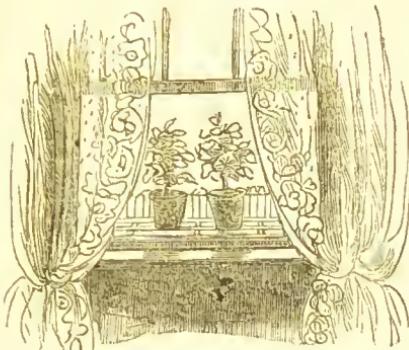


Fig. 1.

cards will keep the flowers in a safe position while in bloom. August is the best month for dividing roots or taking off slips, in order to obtain new plants, and also for shifting the old plants into new pots, which should be placed in the shade until the roots have struck. Pots about seven inches deep, six inches wide at top, and four at bottom, are the most convenient in size for the plants that are to blow in the following spring. Offsets may be grouped into smaller pots until they take root, after which they will require separate pots. As a general rule, do not re-pot any plants when they are budding or in bloom, as the shifting checks their progress and deranges their health. In order to afford sufficient space for potted plants, where the cultivator is limited to the breadth of a window sill without, or within the glazed sash, a moveable platform of bars for the

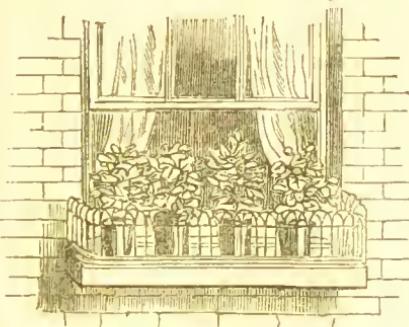


Fig. 2.

outside is to be recommended. This structure is composed of iron bars one inch thick and one inch in width, and twelve or fifteen

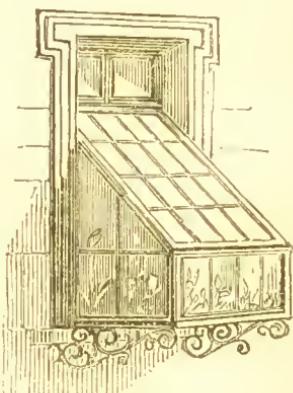


Fig. 3.

with the sill, are covered with plants in pots. A roof of glass is hinged to the window-frame at any convenient height. These sloping roofs fall down upon a stone or wooden front, either solid or filled with glass, and are opened and shut for ventilation by raising up the bottom part of the roof, and securing it at any point of elevation desired, by a curved handle. The plants are watered and arranged from the room within, as the windows are hung on hinges in two parts, and do not generally move up and down as in England. In cases where the sloping roof extends to the top of the window, as is sometimes the case, the window being thrown open, the owner can enjoy the fragrance and beauty of the plants, while they are not subjected to the dust, heat, and dry air of the room, and with the large squares of glass used, they lose little of their effect, even when the window is shut altogether. Fig. 4 is another example of the same kind of window garden, placed opposite the centre window of a drawing room, and extending considerably beyond the breadth of the window on both sides. It is supported on highly ornamental

metallic brackets, and the bottom part in which the pots are set or plants planted in,

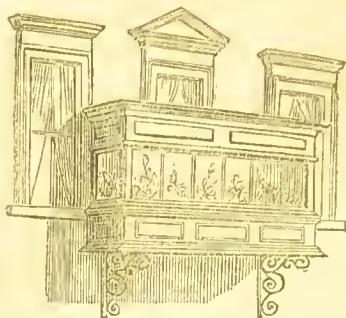


Fig. 4.

is of stone, slate, cast iron, or wood. It should rise to the level of the window-sill, but no higher; indeed, a few inches lower would be no disadvantage. Large panes of glass are used both for the front, ends, and top; one or more of them may be made to open for ventilation; the wall of the house and the easement of the window serve for the back. The operation of arranging the plants is, of course, to be performed from

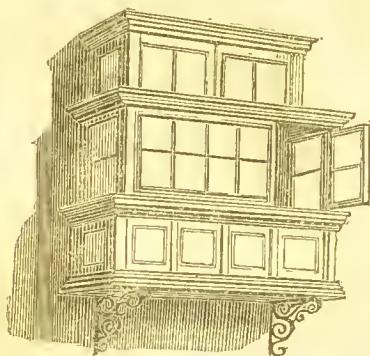


Fig. 5.

the room within, by opening the window. Fig. 5 is the same kind of case adapted to a single window, the ventilation, although shown in front, may without any detriment be placed in the ends—See WARDIAN CASE.

WINDOW PAINTING.—The windows of a house may be very appropriately decorated, with the aid of a recent invention, termed *diaphanie*, which is a beautiful and inexpensive art, combining economy with perfect results. In carrying out this process, a peculiar kind of paper is rendered perfectly transparent, upon which designs are painted in glass colours, which will not change with the light. The paper is applied to the glass with a clear white varnish, and, when dry, a preparation is finally applied, which increases the transparency, and adds tenfold brilliancy to the effect. There is another design, painted in imitation of half-light;

this is used principally for a ground, covering the whole surface with glass, within which (the necessary spaces having been cut out before it is stuck on the glass) are placed medallion centres of Watteau figures, perfectly transparent, which derive increased brilliancy from the semi-transparency of the surrounding ground. This is by far the cheapest method, though involving extra trouble. To ascertain the number of designs required, measure the glass carefully, and then calculate how many sheets of the transparent designs it will take. The sheets are arranged so that they can be joined together continuously, or cut to any size or shape. Choose a fine day for the operation, as the glass should be perfectly dry and unaffected by the humidity of the atmosphere. If possible, it is more convenient to work upon the glass before it is fixed in the frame. If you are operating on a piece of unattached glass, lay it on a flat table, or marble slab, over which must be previously laid a piece of baize, or cloth, to keep the glass steady. The glass being thus fixed, clean and polish the surface on which you intend to operate (on windows this is the inner side), then with the brush lay on it a thick and even coat of the prepared varnish; let this dry for an hour more or less, according to the state of the atmosphere and the thickness of the coat of varnish. Meantime, cut out and trim the designs carefully to fit the glass; then lay on a piece of paper, face downwards, and damp the back of it with a sponge applied several times to equalize the moisture. In this operation, arrange the time, so that the designs may be left finally to dry for a quarter of an hour before application to the glass, the varnish on which will have become sticky, and in a proper state to receive the designs. Apply the painted side next to the glass without pressure; endeavour to let the sheet fall perfectly level and smooth on the glass, so that you may avoid leaving creases, which would spoil the whole. Take now your palette, lay it flat on the design, and press out all the air bubbles, commencing in the centre, and working them out from the sides. An ivory stick will be found useful in removing the creases. The work is now to be left to dry, and, after twenty-four hours, apply a slight coat of liqueur diaphanie, leaving it for another day, when, if dry, apply a second coat of the same kind as the first, which must be left undisputed for several days; finally, apply a coat of varnish over all. If these directions are carefully followed, the glass will not be affected, either by time or the variations of weather; and it can be washed in the same manner as ordinary stained glass, to which in some respects it is superior. The materials used in the practice of this art may be obtained of any artists' colourman.

WINDOWS, TO CLEAN.—First dust the frames and the glass thoroughly, then wipe three or four panes at a time with a piece of wetted wash-leather, the corners of the panes being carefully cleaned out. The leather must, after this, be rinsed and wrung

as dry as possible, and the panes which have been wetted must be rubbed dry with it, and then finished with a fresh leather as quickly as can be done. The leather must be washed in clean water, and hung to dry after the windows have been cleaned. When windows are required to appear particularly bright, a little whiting should be dusted over them after the first washing with the wet leather.

WINDOWS, TO RENDER OPAQUE.—In cases where persons are liable to be overlooked by their neighbours, or otherwise liable to have all their movements watched from without, it will be useful to know that windows may be rendered opaque or non-transparent by the following simple process:—Cover the window-pane very equally with one or two coats of paste; when dry, take a small rag of cotton cloth, dipped in a varnish made of Canada balsam and turpentine; brush this over the paste, and the desired effect will be obtained.

WINDSOR SOAP.—Slice the best white soap as thin as possible, melt it in a pan over a slow fire, seent it sufficently with oil of earaway, and then pour it into a frame, mould, or small drawer, adapted in size and form to the quantity made. When it has stood for three or four days in a dry situation, divide the mass into square pieces for use. By this simple mode, substituting any favourite scent for that of caraway, a person may obtain a good perfumed soap at a very small cost.

WINE BISCUITS.—Rub into one pound of dry flour four ounces of butter, four ounces of white powdered sugar, one egg, and a spoonful or two of thin cream to make it into a paste. When mixed, put currants into one half and caraways into the rest. Cut them as before, and bake on tins.

WINE CASKS, TO SWEETEN.—There are several methods of doing this. 1. If a cask, after the contents are taken from it, be well stopped, and the lees be allowed to remain in it till it is again to be used, it will only be necessary to scald it; taking care, before filling it, to see that the hoops are well driven. Should the air get into the cask, it will become musty, and sealing will not improve it; the surest way will be to take out the head of the cask, to be operated on, then burn it a little, and scald it for use. 2. Set fire to a pound or more of broken charcoal, put it into the cask, and immediately fill up the cask with boiling water. After this, roll the cask once or twice a day for a week; then pour out the charcoal and water, wash out the cask with clean cold water, and expose to the external air for some days. 3. Mix half a pint of the strongest sulphuric acid in an open vessel, with a quart of water, put it into the cask, and roll it about well; next day, add a pound of chalk, bring the cask down, and in three or four days, wash it out thoroughly with boiling water. To prepare a match, melt some brimstone, and dip into it a long narrow slip of coarse linen cloth, or of brown paper; when to be used, set fire to the match, put it in at the bung-hole of the

eask, fastening one end of the bung, and let it remain for a few hours.

WINE DECANTING.—The flavour and appearance of wine are frequently injured by the agitation it undergoes when being transferred from the bottle to the decanter. At rest in the bin, the wine will be bright, but no sooner is the bottle altered from the position in which it has lain, than the disturbance of the deposit is apt to begin; if placed upright for drawing the cork, there will follow a partial subsidence of the rejected impurities, then follows the jolt attendant on extracting the cork, then the agitation inseparable from pouring off, and thins the condition of the wine is lost. The best means of palliating this inconvenience is by the aid of the instrument seen in the annexed engraving, called the Ellutriator.



It is furnished with a piece of mechanism by which means the bottle is sustained as it is raised, and its action follows the motion of the hand, and thus the person decanting is enabled to rest at will during the operation. This machine is also serviceable where wine is transferred at once from the original bottle to the drinking glass. By slightly releasing what is termed the cam, to stop the flow when the glass is filled, the last drop of bright wine may be taken from the lightest or inuddiest deposit, and wine may be thus always drunk in eondition.

WINE, DIETETIC PROPERTIES OF.—As a general rule, the less wine that is drunk the better it will be for the health. There are, however, exceptional cases, such as bodily infirmity and extreme debility, where the drinking of wine in moderate quantity is enjoined, and partaken of with considerable benefit. But when taken habitually and in excess, it produces derangement of the digestive organs, together with gout, apoplexy, and numerous other disorders. Wine is an unwholesome liquid to be drunk with food, because it stimulates the appetite in excess, and causes a person to eat such an amount of food, as to render the process of digestion tedious and difficult. When, however, wines are drunk, some sort of system should be observed as follows:—Wines

should vary with the seasons, light wines are best in summer; in winter, generous wines are preferred. White wine should be drunk with white meats, and red wines with brown meats. Light wines are suitable to light dishes, and stronger wines to more substantial dishes. In summer the wine may be advantageously diluted with water. Light dry wines, such as hock, claret, burgundy, Rhenish, and Hermitage, are, generally speaking, less hurtful than the stronger varieties, as port, sherry, or Madeira. When wine is ordered as a stimulant to debilitated subjects, it should be taken about mid-day, and the quantity swallowed at a draught, not sipped.

WINE GRAVY.—Make a strong rich gravy; heat about one-third of a sauce-tureen of this, and when ready for use, add from two to three tablespoonfuls of rich and new port wine.

WINE JELLY.—Soak four ounces of gelatine in one quart of cold water for half an hour. In the mean time, mix with two quarts of cold, six tablespoonfuls of brandy, one pint of white wine, six lemons cut in with the peel on; the whites and shells of six eggs, the whites slightly beaten, the shells crushed; three pounds of white sugar; then mix the gelatine with the other ingredients, and put them over the fire. Let it boil without stirring for twenty minutes. Strain it through a flannel bag without squeezing. Wet the mould in cold water. Pour the jelly in, and leave it in a cool place for three hours.

WINE, MULLED.—Boil some cloves, mace, cinnamon, and nutmeg, in about a quarter of a pint of water till well flavoured with spice, then add it to a pint of port or home-made wine; sweeten to taste, and serve hot with thin toast or rusks. 2. Boil a small stick of cinnamon, a blade of mace, and three cloves, in a breakfast-cupful of water for a few minutes; add some grated nutmeg and a pint of home-made or port wine, sweeten to taste, boil for one minute, and serve hot. 3. Put a bottle of port wine, half a bottle of water, and sugar to taste, into a saucepan; then add allspice, cloves, and a blade of mace; boil all together, serve in a jug with grated nutmeg, and rusk or slips of thin toast. Some persons add lemon-juice to the mull, but it does not generally please.

WINE SAUCE.—Make thin a few ounces of melted butter, then add a tablespoonful or two of coarsely-pounded loaf sugar, and a glass of sherry, with half a glass of brandy; a little grated lemon-peel or nutmeg, or both together, are improvements.

WINE SOURS, TO PRESERVE.—Fill a jar with the plums, and place it over the fire in a pan of boiling water. Let it remain till the plums are perfectly tender, but unbroken, then remove it. Make a syrup of a pound of sugar, and a pint of water for every pound of fruit, boil and skim it well, then pour it boiling over the fruit; let it remain for five or six days, then re-boil the syrup, adding to each pint a quarter of a pound more sugar. Pour it

again boiling over the fruit, and let it stand for a day before it is covered.

WINE, SPIRIT OF, USES AND PROPERTIES.—Spirit of wine is employed both internally and externally. For internal purposes, it is generally given mixed with other substances, and forming such preparations as tinctures. When it is thought necessary to administer ardent spirits internally, medicinally, brandy is the spirit usually given; this is frequently done to check vomiting, especially sea sickness. As a powerful excitant, it is used to support life during a tedious operation, and to assist in the restoration of a person from a state of suspended animation, as in drowning. In delirium tremens, the moderate use of a long-accustomed stimulus will be necessary to the welfare of the patient. Externally, spirit diluted with water is much employed as a lotion. It is applied, in a diluted state, to the back and sore parts of bed-ridden persons; to the nipples, when inclined to be sore during suckling; to the feet, when the skin is blistered by walking; on the chest, to excite the action of the heart in fainting, or suspended animation; and to relieve the pain arising from bruises; also, as a cold evaporating lotion in inflammation of the brain.

WINE STAINS, TO REMOVE.—Hold the articles in milk that is boiling on the fire, and the stains will soon disappear.

WINE TAKING, ETIQUETTE OF.—It is customary at dinner parties and other repasts among the higher classes, for the assembled guests to take wine with each other. This ceremony is performed when the more weighty business of the meal has passed, and the appetite is appeased. The following rules are generally observed in connection with this custom. When you are about to take wine with a person, you select a favourable moment, and say to the person, "Mr. So-and-so, I should be happy to take wine with you;" the person thus addressed replies, "With pleasure." The challenger and the challenged then fill their glasses, raise them at the same moment, and bow towards each other in silence. When you wish to take wine with a lady, you say, "Mrs. or Miss So-and-so, will you permit me the honour of taking wine with you?" and having received an aequiscent reply, you ask the lady what wine she would prefer; on receiving her answer, you call upon the gentleman sitting next to her to see that her glass is replenished with the wine named. Among relatives and friends, it is customary for mutual acquaintances to request permission to "join in," and in such cases each waits until all the glasses are filled, and the guests bow to one another in due order. In practising this custom, certain laws are laid down, which it would be considered very vulgar to break. For instance, a senior in age, or a superior in rank, always claims the initiative, for it would be regarded as an act of impertinence or presumption for a junior or inferior to challenge those older and higher than himself. The same person should not be asked to take wine twice. Some discretion should

also be observed in challenging, the calls being neither too frequent nor numerous. When a person is asked to take wine, he must on no account decline, as this would be considered a direct insult. Every time that a person is challenged he should replenish his glass, although it may be at the time nearly full. It is not etiquette to drink the whole of the contents of the glass, nor indeed to take a full draught, the merest sip being deemed a sufficient recognition of the compliment. In this ceremony, the timing of the raising of the glass, the catching of the eye, the how, and the expression that accompanies it, are matters which, though trifling in themselves, are nevertheless worth studying, to avoid the appearance of awkwardness and uncouth behaviour.

WINE VINEGAR.—Take any sort of wine which has gone through the process of fermentation, and put it into a cask that has had vinegar in it; then take some of the fruit or stalks of which the wine has been made, and put them, in a wet state, into an open-headed cask, exposed to the sun; place a coarse cloth over the top, and let it remain for five or six days; after which, put the stalks thus prepared into the vinegar, and stir the whole thoroughly; then, put it in a warm place, if in winter, or, if in summer, expose it to the sun, with a slate over the hung-hole. When the vinegar is sufficiently acid, rack it off into a clean sun cask, and bring it up; then put it in the cellar for use.

WINES, BRITISH, GENERAL INSTRUCTIONS FOR MAKING.—In addition to the several recipes which have already been given for making the various kinds of British wines, the following important points in wine-making generally are necessary to be observed in order to ensure successful results:—The fruit should be gathered in fine weather and early in the morning, as under those conditions it is in a much better state for the process it is destined to undergo. Making a careful selection of the fruit after it is picked is essential; reject any unsound or bruised fruit, as unsuitable for the purpose. The quantity of fruit for making a vintage of domestic wine is not so large, but it may be bruised in a tub, and thence removed into the vat, or if the quantity be very small, it may be bruised in the vat. Raisins should be put into the water in the vat, and on the following day taken out and bruised, and then returned to the vat. In vatting, the guard should be placed against the tap-hole, to prevent the husks escaping at the time the *must* or extract is drawn off. When all the fruit is in the vat, the water should be added, and the contents stirred with the vat staff, and left to macerate till the following day, when the tartar, sugar, &c., diluted with a portion of the liquor, are to be put in the vat, and the whole stirred up again. The situation of the vat should be such as to expose it to a free circulation of air, and if fermentation does not take place in a reasonable time, the contents should be stirred frequently, and the place in which the

wine is made should be warmer. The time of fermentation cannot be very accurately specified; but, generally speaking, white wines will require at the rate of two or three days for eighteen gallons; and red wines a day or two more. Flavouring ingredients should be put into the vat when the fermentation is about half over. If the object be the production of a *dry wine*, the fermentation must be protracted by breaking the scum or head, and mixing it with the fermenting fluid; this also renders the wine stronger and better, by re-exciting the languid fermentation. If a *sweet wine* be desired, the fermentation must be checked, by separating the head as fast as it rises; and if the wine is to be brisk, the fermentation ought to be as much as possible carried on in a close vessel, and with this view the liquor should be bottled before the fermenting process is completed. Such wine should be bottled on the approach of spring; this period is also the best for adding flavouring substances or spirits, as they will now incorporate more readily with the wine. Fermentation is comparatively more rapid and more perfect in large than in small quantities; thus, two gallons would occupy a much longer time fermenting than ten gallons. Clean casks are very important. Before using, they should be washed with salt and hot water, and finally with a portion of the fermented liquor in a boiling state. A tendency to acidity may be checked by washing the vat with lime-water immediately after the lime has been perfectly slacked. After the liquor is removed from the vat, it will still undergo a slow fermentation in the cask, during which time some of the liquor will evaporate. The cask should, however, be kept filled, or the scum cannot work off at the hung-hole. When fermentation has completely subsided, close the hung-hole, and bore a hole with a gimlet for a peg to be withdrawn occasionally, otherwise there will be danger of the cask bursting. In the following spring, it should be determined whether the wine is to be then bottled, or to be kept in the wood for another year; the latter plan is to be recommended as improving the wine, provided the wine has fermented properly, and does not betray any signs of deterioration. Under such circumstances, however, it will be advisable to add brandy to the wine, to preserve it, at the rate of a gallon of spirit to twenty gallons of wine; and if the wine is deficient in flavour, sugar-candy may be added at the same time, in the proportion of five pounds to twenty gallons. For the process of bottling, dry weather should be chosen. If the liquor should prove to be not sufficiently fine, draw a quart of it off, and dissolve in it, isinglass, in the proportion of half an ounce to twenty gallons of wine; pour this solution in at the hung-hole, and stir it thoroughly with the contents of the cask. In about three weeks after this, the liquor will be sufficiently clear for bottling. In drawing off, care must be taken to tap the cask above the lees. When bottled, the wine should be stored in a cool cellar, and the bottles laid in saw-dust on their sides:

on no account must they be set upright. The fruits usually selected for making British wines are gooseberries, currants, sloes, damsons, elderberries, grapes, oranges, lemons, and raisins. The gooseberries and currants, when used in their green state, may be made to form light brisk wines, falling little short of champagne. Ripe gooseberries will make sweet or dry wines. Ripe currants, if properly managed, make a wine superior to gooseberries. These fruits are considerably improved by boiling previous to fermentation; this is particularly the case with black currants, which, when thus managed, produce a wine closely resembling some of the best of the sweet Cape wines. The strawberry and raspberry may be used to flavour other wines; but, alone, they are hardly agreeable. Blackberries and mulberries may be used with similar advantage. The juice of the sloe and the damson is acid and astringent; hence, they are qualified for making dry wines. By a due admixture of currants and elderberries, with sloes or damsons, wine, resembling the inferior kind of port, may be produced. The elderberry makes an excellent red wine, which may be further improved by the addition of sloes. Grapes of British growth make excellent wines, and, from the unripe sort, mixed with sugar, a wine may be made closely resembling champagne. The grapes may be used in any condition, however unripe; when even but half-grown, and perfectly hard, they succeed perfectly. A knowledge of this fact will prove very useful, as, in England, grapes frequently fail to ripen, especially in inclement seasons. Raisins, oranges, and lemons, are fruits less in use than any of the preceding, as they contain an excess of acid. The following remarks, although occasionally opposed to generally received notions, emanate, nevertheless, from a reputable authority, and a wine-maker of considerable experience. The great radical defect in the manufacture of domestic wines, is using too small a portion of fruit compared with the sugar employed. It is this circumstance which renders the fermenting process incomplete, and imparts that sweet and cloying taste to most British wines, which renders them intolerable to many persons, unless brandy be added. The fermentative process being rendered tardy and incomplete, by the improper adjustment of the sugar to the fruit, is frequently incited by yeast, than which nothing can be more injurious. Yeast is apt to spoil wine, by imparting to it a certain unpleasant flavour which cannot be overcome. The only ferment to be employed in wine-making is that furnished by nature; or, when this is defective, as is sometimes the case in our domestic fruits, the ferment of the grape may be supplied artificially, by introducing a portion of crude tartar, in the proportion of from two to four pounds of tartar to a hundred pints of liquor, the sweetest kind requiring the larger proportion. The same authority declares that the addition of brandy or any spirit to wine is not only unnecessary but even injurious, unless it be

kept for a certain number of years, or added in very small quantity. Wine made upon true chemical principles will keep any length of time without containing any other alcohol than the product of the fruit and sugar. There are numerous other theories and systems respecting the art of wine-making, but the foregoing hints are deemed sufficiently worthy of a trial. For the various recipes, see BLACKBERRY, Currant, ELDERBERRY, GOOSEBERRY, LEMON, ORANGE, PARSNIP, RAISIN, ETC.

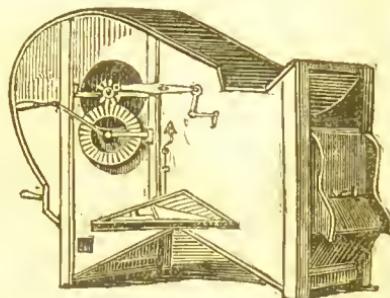
WINES, HOME MADE, TO IMPROVE.— Poor wine may be enriched by being racked off, and afterwards returned into the cask; and then putting into the wine, about a pound of raisins bruised, and a quart of brandy. An ounce of powdered roche alum, mixed in four gallons of the wine and returned to the cask, will make the whole fine and brisk in ten days. Pricked wines may be restored by being racked off into a fresh cask, which has contained some of the same kind of wine. The cask is to be matched or sulphured; and to every ten gallons, put two ounces of oyster-shell powder, and half an ounce of bay-salt; then stir it, and let it stand for a few days to fine; after which, rack it off into another cask also matched. A quart of brandy added to every ten gallons, will further improve the wine. Acidity may be cured as follows:—Burn dry walnuts over a charcoal fire, and when they are thoroughly lighted, throw them into the wine, and bung up the cask; in forty-eight hours all acidity will have departed. Mustiness and disagreeable flavour may be removed by ripe medlars, or bruised mustard-seed, tied in a bag and suspended from the bung-hole. To remedy ropiness in bottled wines, shake it for twenty minutes, uncork it, and pour off the pith or scum, when the residue of the wine will be drinkable.

WINES, NATURE AND TREATMENT OF.—Young wine is bright and red at first, owing to the presence of phosphoric and other acids. As these acids become subdued, the colour is subdued also, until all that raw brightness, indicative of immaturity, is mellowed and ripened into the rich tawny hue—that mixture of glowing red and yellow brown, with the golden light striking through, which every one takes as his surest guide in the choice of port and red wines. The bouquet of wines depends upon the proportion which they contain of a kind of ether. It does not exist in the juice of the grape, but is produced during fermentation, and increases in quantity by keeping. The odour of this substance is very powerful, and is one of the general characteristics of all grape wines. The crust of wine is thus explained: Tartaric acid exists in the juice of the grape in combination with agents, forming cream of tartar. When the fermented juice is left at rest, this cream of tartar gradually separates from the liquor, and deposits itself as a crust, or tartar, on the sides of the casks and bottles. Hence, by long keeping, good wines become less acid, and every year added to their age increases in proportion their marketable

value. A damp cellar aids the maturation of wines. A factitious mode of bringing forward bottled port wine, is occasionally to throw over it cold water; but, after the wine has become ripe, it must be drunk speedily, else it will soon become unfit for the table. If newly-bottled wine be exposed to the sun, it will begin shortly to deposit and improve in flavour; and even the rawest wine of this kind, by placing the bottle in water, and boiling it, will cause it to assume the quality it would have had after many years keeping. The choicest wines are ordinarily iced: whereas (with the exception of wine which gains strength by cold), common wines only should be iced; and even they would be better if merely cooled with water, which imparts sufficient coolness to wine even at the hottest temperature of summer. But, it is not only the avoidance of icing choice wines that attention must be paid to; each separate kind requires a different degree of cold and warmth. Thus, claret, when just brought out of the cellar, has not that soft and delicate flavour which gives this wine its peculiar value. Before drinking it, the wine should be placed where it may imbibe a degree of warmth. In winter it should be placed before the fire. Burgundy should be drunk fresh from the cellar. A decanter of wine may be readily cooled by folding round it a wet cloth and placing it in a current of air.—See CELLAR, CLARET, FINING, PORT, SHERRY, ETC.

WINNOWING.—A process performed by the aid of wind, by which the chaff of corn is separated from the grain. Winnowing-machines or fanners, as they are called, are sometimes attached to thrashing-mills, or separately. Some farmers winnow their grain by hand-fanners, which are thought to be steadier in the motion than when driven by machinery, and consequently the grain is more thoroughly cleansed. After thrashing, the grain is regularly dressed in the clean corn room by means of fanners, riddles, and sieves; and this final dressing is regulated according to the state in which the grain comes from the thrashing-mill. By the process of winnowing, chaff, bits of straw, the seeds of weeds, and other refuse, are separated from the grain: and it is a wise precaution to boil the latter before putting them on the dung-hill, which will effectually destroy their vegetative powers. The different qualities of grain are also separated from each other, by which it is rendered more valuable than when the good and bad are mixed together. The thorough cleaning and dressing of grain, are of great importance to the farmer, and he will find it to add to his profit in the end to have this effectually done. Barley undergoes a process called hummelling by which the awns are broken off from the grain. The machine is composed of a vertical spindle enclosed in a cylinder, and furnished with arms, which act upon the grain. It is sometimes attached to the thrashing-mill and sometimes driven by a separate power. The grain is put at the top of the cylinder, and as it passes through, the awns are broken off, by being struck by the arms attached to

the spindle. A more simple process is, after the barley is thrashed, to take off the head of the drum, and put on another cover of tin perforated with small holes about three-sixteenths of an inch wide. The barley is pressed through the rollers, and by this the awns are rubbed off. A highly improved



form of a winnowing-machine is represented in the annexed engraving.

WINTER CRESS.—This is used as a substitute for water-cress, and to mix into salads; it should be sown in spring and autumn, the first on a shaded piece of ground and the latter in a warm border, and being afterwards thinned out to a distance of six inches one from another, will afford a gathering day for a long period: in hot weather it begins to run to seed, but if the flower-stems are snipped off as soon as they are discovered the plants will go on producing leaves, which are the parts desired to be eaten.

WINTER DRINKS.—The following list of recipes will be found to afford several warm and comforting drinks for the winter season:—

Aleberry.—Mix two large spoonfuls of fine oatmeal in a sufficient quantity of sweet small beer, two hours previous to using it; strain, well boil, and sweeten according to taste. Pour it into a warm jug, add wine, lemon-juice and nutmeg to taste, and serve hot with thin slips of toast or with rusks.

Ale Mulled.—Boil a pint of good sound ale with a little grated nutmeg and sugar. Beat up three eggs, and mix them with a little cold ale; then add the hot ale to it gradually, and pour the liquor to and fro from one vessel to another, several times, to prevent it curdling. Warm and stir till it thickens, then add a tablespoonful of brandy, and serve hot with toast.

Crambambull.—Boil two bottles of light porter or ale in a pan. Then put into the liquor half a pint of rum, and about three-quarters of a pound of loaf sugar. When this has boiled for a few minutes, take the whole from the fire, and put into the mixture the whites and yolks of seven eggs, previously well whisked; stir the whole for a minute or two, and pour it into a punch bowl; serve out in tumblers.

Caudle.—This is variously made. 1. Make half a pint of fine gruel with the patent groats, add a piece of butter the size of a large nutmeg, a tablespoonful of brandy and white wine, and a little grated nutmeg and

lemon-peel: serve hot. 2. Put three quarts of water into a saucepan over the fire, and let it boil: mix smoothly as much oatmeal as will thicken the whole with a pint of cold water, and when the water boils, pour on the thickening, and add about twenty peppercorns finely powdered. Boil till rather thick, then add sugar to taste, half a pint of good ale, and a wineglassful of gin, all warmed up together. Serve hot.

Caudle Flummery.—Put half a pint of fine oatmeal, into a pint of spring-water, and let it stand all night. In the morning, stir it well, and strain through a coarse sieve into a saucepan, then add two blades of mace and some grated nutmeg; set it on the fire; keep it stirring, and let it boil for a few minutes longer; add half a pint of white wine, a tablespoonful of orange-flower water, the juice of an orange and of a lemon, sugar to taste, and a piece of butter about the size of a walnut; warm the whole together, thicken with the yolk of a well-beaten egg, and drink hot.

Caudle Oatmeal.—Take a quart of ale, a pint of stale beer, and a quart of water; mix all together, and add a handful of fine oatmeal, six cloves, two blades of mace, some nutmeg, and eight allspice berries bruised. Set the mixture over a slow fire, and let it boil for half an hour, stirring it well all the time: then strain through a coarse sieve, add half a pound of sugar, and a piece of lemon-peel. Pour the whole into a pan, cover close, and warm before serving.

Caudle Tea.—Make a pint of strong green tea, pour it into a saucepan, and set over a slow fire. Beat the yolks of two eggs well, and mix with half a pint of white wine, grated nutmeg and sugar to taste; pour this into the saucepan, stir the whole well till hot, then serve.

Egg Flip.—To make a quart of flip, put the ale on the fire to warm, and beat up three eggs with a quarter of a pound of moist sugar; remove the froth of the ale while on the fire, until it begins to boil, mix the froth with the sugar and eggs, add grated nutmeg or ginger to taste, and a gill of rum. When the ale boils, stir it gradually into the eggs and rum, until quite smooth, then serve.

Egg Wine.—Beat up an egg and mix it with a tablespoonful of spring water. Put into a small saucepan, a wineglassful of white wine, half a tumblerful of spring water, with sugar and nutmeg to taste, set it over a slow fire, and when it boils, add it gradually to the egg, stirring well; then return the whole to the saucepan, and place it over the fire again, stir it for a minute, remove it, and serve it with toast.

Elder Wine Mulled.—Put a sufficient quantity of elder wine into a saucepan, warm it over the fire, adding if requisite, sugar, spice and water. Serve hot with snippets of toasted bread or rusks.

Single.—Roast three apples, grate some nutmeg over them, add sugar to taste and place the whole in a quart jug, with some slices of toasted plum cake; make some ale hot, fill up the jug with this and then serve.

Milk Muddled.—Boil a quart of new milk for five minutes; add two ounces of sugar and

a piece of cinnamon; then pour it into a basin and let it remain till cool, beat the yolks of five eggs thoroughly, adding a little cream; pour the milk gradually upon the eggs, stirring constantly; return the milk into the pan, and stir it over the fire till it thickens, but do not allow it to boil; strain it through a fine sieve into a jug; pour it several times from one jug to another, and it will then be ready.

Oxford Mixture.—Take half a tumbler of tea made as usual with sugar and milk, add a slice of lemon, a wineglassful of new milk, and the same of rum or brandy; beat up a new-laid egg, and add it to the other ingredients while warm.

Poor Man's Drink.—Put two quarts of water into a saucepan with four ounces of pearl barley, two ounces of figs split, two ounces of raisins stoned, and an ounce of root-liquorise sliced: boil all together till only a quart remains; then strain and serve warm.

Posset.—This may be composed after various methods, as follows:—Cut a pound of bread into small pieces, boil it in three quarts of new milk, and when it has boiled about two minutes, take it off the fire; put a quart of lemonade, three tablespoonfuls of ginger syrup, and sugar to taste, in a large bowl or tureen; then put in carefully with a teacup, the bread and milk; let it remain undisturbed for two or three minutes; then put down the bread, very gently with a spoon, and sift powdered cinnamon on the top. 2. Boil a pint of new milk with a slice of toasted bread, sweeten a bottle of mild ale, and pour it into a basin with nutmeg or other spice, add the boiling milk, and when it froths up, serve. 3. Put a quart of new milk into a saucepan, and place it over a slow clear fire. When it boils, crumble four savoy biscuits into it; give it one boil, remove it from the fire, add grated nutmeg and sugar to taste, stir in half a pint of canary wine and serve. 4. Boil a pint of milk, add sufficient treacle to curdle it; allow the curd to settle, strain off the liquid, and drink it as hot as possible. 5. Mix half a pint of ale with a pint of cream; then add the yolks of four eggs, and the whites of two well beaten, sweeten to taste and flavour with nutmeg. Pour into a saucepan set over the fire, stir well until thick, and before it boils, remove; pour into a basin and serve hot. 6. Boil a stick of cinnamon, and a quarter of a nutmeg, with a quart of new milk, and when it boils remove the spice. Beat the yolks of ten eggs well, and mix gradually with the milk until thick; then beat the whites of the eggs with sugar and canary wine into a snow. Put a pint of canary into a saucepan, sweeten it to taste, set it over a slow fire, and pour the milk and snow into the saucepan, stirring all the time that it is over the fire, cover close and set aside for a short time before drinking.

Punch.—Take two large fresh lemons with rough skins and full of juice. Rub some lumps of white sugar over the lemons till they acquire the oil from the rind, then put them into a bowl with as much more as is necessary to sweeten the liquor to taste; squeeze the lemon-juice on the sugar, and

bruise the sugar in the juice, add a quart of boiling water and mix well; then strain through a fine sieve, and add a quart of rum, or a pint of rum and a pint of brandy, or a pint and a half of rum and half a pint of porter; then add three quarts more of water and mix the whole well.

Toddy Buttered.—Mix a glass of rum-grog of considerable strength, sweeten it with honey, flavour with nutmeg and lemon-juice, and stir into it a piece of fresh butter about the size of a walnut.

Warm Drink.—Boil a quart of milk, and a quart of water, with the top crust of a penny loaf, a blade of mace, and sufficient sugar to sweeten, let the mixture stand for a quarter of an hour, then pour it off and drink it warm.

WINTER FLOWERS AND FRUITS, TO PROCURE.—The shrubs or trees should be taken up in the spring, when they are about to bud, and some of their soil preserved about the roots; they must then be placed upright in a cellar till the end of September; when, with some fresh earth, they are to be put into proper tubs or vessels, and placed in a stove or hot-house, where they should be moistened every morning with a solution of half an ounce of sal-ammoniac in a pint of rain-water. By this process, in the month of February, fruits and flowers will appear; if flowers are sown in pots at the end of September, and watered in a similar way, they will blow at Christmas time.

WINTER HOTCH-POT.—Wash and pick a pound of dried green peas, steep them for twelve hours in fresh soft water, put two carrots and two turnips sliced, and one carrot and one turnip whole, one savoy cabbage, four onions, and the peas into a pan with a gallon of water; let the whole boil for two hours, then take out the whole carrot and turnip, bruise them well, and return them with the remainder of the sliced vegetables into the pan, boil the whole gently for an hour, and when nearly ready add the white part of a root of celery cut into very small shreds.

WINTER PEA-SOUP.—Having saved the liquor in which a piece of meat has been boiled, take off the fat, and put it in a saucepan with as much water as may be required to take off the saltiness and make up the quantity of soup, which for two days' consumption of six persons should be about a gallon; then add a pound of shin of beef, a pound of pork rinds, and carrots, turnips, onions, celery, and two parsnips, all browned in the usual manner: a little unchopped parsley, and two dozen black peppercorns. When the pot boils remove the scum, and put in two quarts of split peas which have been carefully picked and rubbed. Boil gently for three hours; skim off the fat, and strain the liquor through a fine sieve, beating the vegetables through with a wooden spoon. The pork rinds must be removed, but the pieces of meat should be put back into the pot with the liquor and the pulp; boil up for a minute or two, and serve with some shred mint, and toasted bread, cut in small pieces. If the saved liquor should be

from fresh meat, three pounds of beef should be procured, and a little salt added. For this dish, young peas should be chosen; they may be known by the transparent brightness of their colour.

WINTER SALAD.—Wash very clean one or two heads of endive, some heads of celery, some mustard and cress; cut them all small, add a little shredded red cabbage, some slices of boiled beet-root and onion, if the flavour is not disliked; mix them together with salad sauce. In spring, add radishes, and also garnish the dish with them.

WINTER SOUP.—Take carrots, turnips, and a head of celery cut into dice, with a dozen button onions; half boil them in salt and water, with a little sugar in it; then throw them into the broth, and when tender, serve up the soup; or, use rice, dried peas and lentils, and pulp them into the soup to thicken it. With many of these soups, small suet dumplings, very lightly made, and not larger than an egg, are boiled either in broth or water, and put into the tureen just before serving, and are, by most persons, thought an improvement, but are more usually put into plain gravy soup than any other, and should be made light enough to swim in it.

WINWICK PUDDING.—Grate four large apples; add the rind and the juice of a lemon, two tablespoonfuls of bread crumbs; three ounces of butter, melted, and sugar to taste; immediately before putting it in the oven, add three eggs, well beaten, then bake in a puff paste.

 Apples, 4 large; lemon, 1; bread crumbs, 2 tablespoonfuls; butter, 3 ozs.; eggs, 3.

WIRE WORM.—This destructive insect is produced by the larva of a beetle; it commits considerable ravages on vegetation, and is a great enemy to the farmer. The best means of destroying this pest is, to apply to the land sulphate of magnesia in the proportion of a hundred-weight and a half to the acre, to be used as a top-dressing in spring. A mixture of salt and lime is also an economical dressing for the land, and will greatly assist in the work of destruction.

WITNESSES, REMUNERATION, RESPONSIBILITY AND DEPARTMENT OF.—The remuneration of witnesses is usually regulated according to the trade, profession, or social position of the witness; and if he has come any distance, certain travelling expenses are allowed. It is customary, in actions at law, to serve a witness with what is called a subpoena, compelling his attendance under a penalty, and at the time the subpoena is served, the witness is entitled to receive one guinea, and he may even refuse to tender his evidence until this payment is made. A witness having been bound over to give evidence is compelled to do so, on pain of forfeiting his recognizances and rendering himself otherwise amenable to punishment for contempt of court. A witness is permitted to be sworn according to any form most binding on his conscience, and is not obliged to take the oath usually

presented. Thus, the Quaker may make affirmation, the Jew is permitted to kiss the Old Testament with his hat on, and the native of Chiua to break a saucer, each form being considered equally binding. As most persons are, at some time of their lives, called upon to give evidence in a court of law, a few hints as to the manner in which a witness should conduct himself, will be found of service, as follows:—*Be truthful*; one deviation from the truth will lead to many others, until the witness becomes involved in a perfect labyrinth of misrepresentation, in the midst of which he is denounced by the counsel, reprimanded by the judge, and held up to scorn in the public journals. A witness who wilfully misrepresents facts, also renders himself liable to an indictment for perjury, the punishment for which is a most severe one. As a check to false swearing, it should be borne in mind that persons who make the receiving of evidence the business of their lives, are very nice discriminators of the true and the false, so much so, that in nearly every instance an experienced judge or counsel is able to tell by the manner of a witness whether he is speaking truly or falsely. *Give laconic, direct, and straightforward answers.* In tendering evidence, this is a most important feature. It will tend greatly to the advantage of the party for whom the witness appears, and will render the ordeal of the witness-box more bearable. State only what you know to be the facts, and do this in as few words as possible. When a question is put that requires either an affirmative or a negative answer, say "yes" or "no," and nothing more. Forbear to relate what you heard, or what was reported, or what you thought about the matter; these have nothing to do with facts, and facts are what are wanted. *Be calm and collected.* This is a direction which is perhaps more easily given than attended to. To a person of nervous or excitable temperament, the appearing in a witness-box with every eye suddenly turned towards him, is a most trying circumstance, and is apt to cause him to lose all presence of mind. Nevertheless, a witness may exercise considerable control over himself by attending to the following hints. Turn your face to the jury, and look neither to the right nor to the left; even when the counsel questions you, you are to return the answer, not to him, but to the jury. By this means, the eye will be kept from wandering, the thoughts will be concentrated, and the witness will escape being experimented upon by those extraordinary grimaces, gesticulations, and other forensic arts which counsel systematically employ by way of intimidation or cajolery. *Preserve your temper.* This is a very necessary caution to a witness, for the probabilities are that he will meet with much to disturb his equanimity and offend his self-respect, especially if he have important evidence to tender. But a witness ought to know that counsel are paid to act a part, and that they have also a certain licence; also, that inasmuch as they have not in all probability ever seen the witness before, nor are likely to see him

again, they cannot bear any malice or ill-will towards their interlocutor; their inuendos and personal allusions being based upon this theory, that if they can establish any circumstance derogatory to the character of the witness, so much the better for their client, and if they fail in doing so, so much the better for the witness himself. Now, if the occupant of the witness-box suffers himself to be angered by the insinuations of the counsel, he does a very foolish thing, for in these cases the counsel occupies a superior position, and has the ear of the court, while the witness only succeeds in making himself appear weak-minded and ridiculous. *Be serious.* A person tendering evidence in a court of law is performing a grave duty, and he ought to divest himself of anything approaching levity or flippancy. Above all, let a witness abandon all attempts at witticisms or repartee, for counsel are mostly masters of those arts, and all attempts at supplanting them end in discomfiture.

WIVES, HINTS FOR.—The wife's proper domain is the household, and it is incumbent upon her, both for her own convenience, and for the comfort of her husband and other members of the family, to render home as attractive and agreeable as possible. In the first place, the rooms are to be neatly and orderly arranged, and the furniture so disposed that it may be rendered available for use rather than mere show. Again, there are many et ceteras, trivial in themselves but important as a whole, which go far to render home comfortable. Among these may be mentioned a bright fire, a clean swept hearth, a well-trimmed lamp; if these be wanting, a husband will in the course of time become indifferent to his own fireside, and find out some other place where he can obtain the missing comforts. The better feelings of a husband may also be appealed to, through the medium of creature comforts; there are many nice dishes which a wife can prepare, and many an agreeable surprise which very limited knowledge in the art of cookery may enable the practitioner to contrive. These afford much gratification, not only in a mere animal point of view, but from the fact which makes itself known to the dullest apprehension, that to produce these effects, there must have been an exercise of consideration, thought, and kindly feeling. Another point for the wife to observe is the exercise of economy; comfort does not precisely depend upon the amount of money expended; for a shrewd and thoughtful woman will be able to show considerably more value for her money than another who is thoughtless and extravagant. The exercise of economy is not to be governed by present necessities only, but with a view to future emergencies. The most prosperous may at some time or other meet with a reverse, and wasteful expenditure cannot be defended under any circumstances. The wife, like all other persons in every situation of life, will possibly have her trials and troubles, and, to meet these, she must call philosophy to her aid. In the first place, she must not draw too highly

coloured a picture of her possible home, for if so, she is sure to be disappointed; much of the apparent unhappiness of wives, is owing to a view having been taken of human life, which is more poetical than practical. Under all circumstances, a wife must school herself to look at the bright side of things, and make the best of them—not vainly repining at wants and defects, but setting to work to contrive the means of remedying and repairing them. A due appreciation of the value of time is also well worthy of consideration; each day should have its work planned out, and each hour the performance of certain duties allotted to it. By this means, matters will progress regularly and smoothly, and all that bustle, disorder, and confusion, so frequently witnessed, will be avoided. To carry out this object more surely, a system of early rising must be adopted, and strictly adhered to; every one knows, how much more work can be done in the early part of the day than in the afternoon, and if this precious portion of time is frittered away, it can never be regained; and the consequence is that there is an incessant race all day long, in which work is fruitlessly endeavouring to overtake time. In the governing of her home, the wife should keep her dominion to herself, suffering no one to dictate as to what should or should not be done, and allowing no one to share her rule with her. The results of her individual management may not be perfection, but at any rate they will afford that feeling of satisfaction which attends all independent and well-directed efforts. On the other hand, she should not be constantly vexing her mind with the superiority, real or imaginary, of her neighbours. If a resident on the left hand has a more tastefully arranged and beautifully-stocked garden than appertains to her own house, she need not on that account be pained, and lose all pleasure in her modest plot of ground; or if the windows of her right-hand neighbour exhibit certain articles which she does not possess, there is no occasion for her to pine with envy, and neglect her own home in consequence. It is to this feeling that may be attributed much of the discontent, neglect, and indifference which prevails in domestic management. All that a wife has to do to secure substantial comfort and lasting happiness, is to turn her thoughts homeward, without suffering them to be distracted by extraneous matters, and determine within herself to make her little domain as pleasant and cheerful as the means and appliances at her command will permit. If a wife does this properly she will find her time fully occupied and something always to do, without mentioning the duties of maternity, the cultivation of accomplishments, and indulgence in amusements.

With regard to the manner in which a wife should consult the interests of her husband, and conduct herself generally towards him, much may be said. In the first place, she must not torment him with the petty cares of home, and vex his mind with trivial grievances which he cannot

remedy, if she cannot. Neither should she harass him by preferring inconsiderate claims, and trying to persuade him either to expend money or sacrifice time, for the mere gratification of a whim. It must be borne in mind that a man has his especial cares connected with business pursuits, and instead of having this aggravated by household concerns, he looks to their being assuaged by finding in home a refuge and a place of quiet. A most important duty of every wife is to so order her domestic arrangements that the husband may calculate upon them. For instance, the hours of meals should never vary, if possible, one minute; dinner-time is in many cases, an interval snatched from weighty employment and important labours, and if the interval is unnecessarily delayed, business arrangements are upset, the temper is soured, and the food is neither grateful to the palate nor nourishing to the body. This uncertainty is not only disappointing and vexatious to one party, but to both; thus, the husband comes home to-day and finds his dinner behind time: to-morrow, in order to make allowance for his wife's unpunctuality, he delays the time of coming home, but it so happens that the dinner is on this day ready to the minute: it is now the wife's turn to be vexed. The next day, the husband, wishing to repair the former mischief, makes his appearance to the second, but the wife, taking the previous day as a precedent, is again behind; thus the couple go on playing at cross purposes and keeping alive a constant feeling of bitterness, from the want of punctuality. A wife should study her husband's tastes and distastes, and to a certain extent even gratify his whims; by pursuing this line of conduct, she will more surely retain the affection of her husband, and be enabled to exercise influence over him, than by the practice of antagonism. A wife should be good-tempered and cheerful; one angry look, one harsh word may embitter hours, or be the cause of a week's estrangement. Besides, this rule should be observed as much for her own sake as on her husband's account, a good temper sitting so much easier than a bad one. On the other hand, a wife ought to bear with patience an occasionally clouded brow or a hasty word on the part of her husband; these evidences are possibly owing to the reminiscences of some unpleasant commercial affairs, and if met in a conciliatory spirit, they will soon disappear, and be replaced by affectionate smiles and kind words. There are numerous other duties appertaining to a wife, but they are, for the most part, so well defined and obvious, as to need only the exercise of common sense and good feeling to ensure their execution.

WOAD.—This plant is cultivated for the sake of its leaves, which, after being properly prepared, are used as an ingredient in dyeing blue, and as a basis for black dye. Three or four crops are obtained in a year. After the leaves are gathered, they are ground in a mill to a sort of paste, which is then pressed into heaps. A blackish crust forms on the outside. After thus lying for about a

fortnight, the liems are opened, the crust rubbed and mixed with the interior por-



tions, and the whole formed into oval balls, which are pressed close and solid in wooden moulds. When about to be used in dyeing, the balls are broken into fragments, and allowed to ferment, by which a dense fetid fume is given off. By steeping the leaves in water, an infusion is obtained, which will impart a green dye; and this green changes to blue, on exposure to the air.

WOMEN'S UNINFLAMMABLE DRESSES.—See *The Practical Housewife*.

WOOD, AS FUEL.—Although wood is not commonly employed in this country as a domestic fuel, it will in many cases be found a most useful auxiliary to coal, and afford an excellent and cheerful fire at an economical rate. The best form in which to burn wood for this purpose, is that known as the log or clump; and one of these, placed on the fire in the after part of the day, when the grate is perfectly heated, will last for many hours. It should be observed that wood fires are more dangerous than coal, as the embers are apt to shoot out into the room, and, therefore, unless carefully watched, or protected by a screen, many accidents are likely to occur.

WOOD, CEMENTS FOR.—A cement for joining wood to ivory or bone is composed as follows:—Dissolve fine Russianisinglass in strong acetic acid until the consistence of a strong firm glue is obtained; this is applied to the articles which require joining by means of a brush. This cement will be found particularly serviceable in cases where the ivory keys of pianofortes and other inlaid pieces become detached. A cement for uniting wood to metal is compounded in the following manner:—Take two parts by weight of Portland cement, and the same quantity of clean silver sand, both sifted very finely, and intimately mixed with glass dust. Any quantity of this may be made at one time, and put by for use in air-tight vessels. When about to be applied it should

be incorporated with white of egg, diluted with two-thirds its bulk of water, with every fluid ounce of which there had been previously mixed from twelve to fourteen drops of vinegar. To unite the materials most securely, the surface should be first moistened with the egg mixture, afterwards applying the cement, kneaded into a thick paste with the white of egg, also: finally, applying a portion of the paste made of a much thinner consistence. The parts to be joined must be very neatly adjusted, and where plain surfaces exist, the roughening them will facilitate the junction. The cement must be liberally applied, every crevice being filled up, and the superfluity squeezed out by strong pressure, continued for forty-eight hours.

WOOD, TO PAINT.—In performing this process, it is expected that the knots in the wood, especially deal, should be treated in such a manner as to prevent their giving out turpentine, which they will otherwise do, to the destruction of the paint. For this purpose, a composition is made with red and white lead, ground fine with water on a stone, and mixed with strong double glue size, in a warm state, and, in this condition, to be brushed over the knots. When turpentine exists to any extent, a second coat of white lead, ground in oil, with the addition of four parts of red lead, or litharge, will be necessary. This must be suffered to become quite dry, and then should be rubbed with pumice-stone. The next process is priming. For this purpose, a paint is composed, chiefly of white lead, mixed with a very small quantity of red lead, or linseed oil; the preparation to be laid on lightly, so that a pound ought to be made to cover eighteen or twenty yards of woodwork. A second coat is usually applied, still thinner than the first coat, and, in this condition, the work is said to be primed and coated, ready for painting. When this is dry, all holes and indentations, caused by the nails, must be filled with putty, and the whole surface brought, as nearly as possible, to the required condition of smoothness. After this, a coat of paint of the intended colour is laid on, and, a day or two subsequently, the finishing coat. The various colours are mixed with oil and turpentine, and a dryer, or with turpentine and a dryer without oil, if it be desired that the first coat shall appear dead, or flattened, as it is called. For graining, a groundwork of oil colour is first made by laying on two coats of a colour, much lighter than the wood which is to be imitated; and then with various tools, and by the aid of tricks, the veins, &c., in the wood, are laid on either with turpentine, coloured to match them, or with beer, and, sometimes, water. A varnish is finally laid upon this, and the process is complete.

WOOD, TO PRESERVE FROM FIRE.—Immerse in a solution composed of equal parts of alum andisinglass. Although wood is thus rendered incombustible, it still retains the power of transmitting heat; so that liquids may be boiled in a wooden vessel on a common fire, if this varnish be previously applied to it.

WOOD, TO PROTECT FROM THE INFLUENCES OF AIR OR WATER.—A composition for the preservation of wood under these circumstances is composed as follows:—Take ten parts of sulphuret of copper, two parts of sulphuret of antimony, and from five to thirty parts of the best drying varnish. These substances must be ground together, forming a kind of paint, which is then to be applied to the wood. Another means of protecting wood, peculiarly liable to the influences of damp, is, to heat twelve pounds of resin in a mortar, with three pounds of sulphur and twelve pints of sperm oil. This mixture is to be melted over the fire, continually stirring meanwhile. Ochre, reduced to a very fine powder by grinding it down with oil, must then be combined in the proportion necessary to impart either a darker or a lighter colour to the material. The first coat must be put on very lightly, having been previously heated; the second coat may be laid on two or three days afterwards; and a third after a similar interval.

WOOD, TO REMOVE STAINS FROM.—Stains of nearly every description may be removed from wood by the following method:—Mix a quarter of an ounce of oil of vitriol with two ounces of water, and rub the stained surface with a cork dipped in this liquid until the stains disappear; then wash the part with cold water. The colour of the wood will fade for some time after this application; but it may be restored by rubbing it with ordinary furniture paste.

WOOD, TO STAIN.—Any ordinary kind of wood may be stained of certain colours, or made to imitate other woods, by the following process:—*To stain wood of a black colour.* 1. Drop a little sulphuric acid into a small quantity of water, brush the wood over with this and hold it to the fire, a fine black colour will be produced, and it will receive a good polish. 2. Take half a gallon of vinegar, an ounce of bruised nutgalls, half a pound each of logwood chips and copperas, boil well, add half an ounce of the tincture of sesqui-chloride of iron, and brush it on the wood in a warm state. 3. Take half a gallon of vinegar, half a pound of dry lamp-black, and three pounds of iron-rust sifted. Mix, and let it stand for a week. Lay three coats of this on hot, and then rub with linseed oil, and a fine deep black will be produced. 4. Add to the above stain an ounce of nutgalls, half a pound of logwood chips, and a quarter of a pound of copperas; lay on three coats, oil well, and a black stain will result impervious to any kind of weather. 5. Take a pound of logwood chips, a quarter of a pound of Brazil wood, and boil for an hour and a half in a gallon of water. Brush the wood several times with this decoction while hot. Make a decoction of nutgalls by simmering gently for three or four days a quarter of a pound of the galls in two quarts of water. Brush the wood several times with this decoction while hot; give the wood three coats of this, and while wet lay on a solution of sulphate of iron, and when dry, oil or varnish. 6. Give three coats with a solution of

copper filings in aqua-fortis, and repeatedly brush over the logwood decoction, until the greenness of the copper is destroyed. 7. Boil half a pound of logwood chips in two quarts of water, add an ounce of pearlash, and apply it hot with a brush. Then take two quarts of the logwood decoction, half an ounce of verdigris, and the same of copperas; strain, and throw in half a pound of iron-rust. Brush the work well with this, and oil it. *Blue colour.* 1. Dissolve copper filings in aqua-fortis, brush the wood with it, and then go over the work with a hot solution of pearlash (two ounces to a pint of water), till it assumes a perfectly blue colour. 2. Boil a pound of indigo, two pounds of wood, and three ounces of alum in a gallon of water; brush well over until thoroughly stained. *Imitation of Botany Bay wood.* Boil half a pound of the unripe berries of the *rhamnus infectorius*, in two quarts of water, till of a deep yellow, and while boiling hot, give two or three coats to the work. If a deeper colour be desired, give a coat of logwood decoction over the yellow. When nearly dry, form the grain with No. 7 black stain, used hot, and when perfectly dry, varnish. *Green colour.* Dissolve verdigris in vinegar, and brush over with the hot solution until of a proper colour. *Mahogany colour.* 1. Boil half a pound of madder, and two ounces of logwood chips in a gallon of water, and brush well over while hot. When dry, go over the whole with pearlash solution, two drachms to the quart. 2. Put two ounces of dragon's-blood, bruised, into a quart of oil of turpentine; let the bottle stand in a warm place, shake frequently, and when dissolved, steep the work in the mixture. *Light red brown.* Boil half a pound of madder and a quarter of a pound of fustic in a gallon of water; brush the work when boiling hot, until properly stained. 2. The surface of the work being quite smooth, brush over with a weak solution of aqua-fortis; half an ounce to the pint, and then finish with the following:—Put four ounces and a half of dragon's-blood, and an ounce of soda, both well bruised, to three pints of spirit of wine; let it stand in a warm place, shake it frequently, strain, and lay on with a soft brush, repeating until of a proper colour; polish with linseed oil or varnish. *Purple.* Brush the work several times with the logwood decoction used for No. 6 black, and when dry, give a coat of pearlash solution, one drachm to the quart, taking care to lay it on evenly. *Red.* 1. Boil a pound of Brazil wood, and an ounce of pearlash in a gallon of water, and while hot, brush over the work until of a proper colour. Dissolve two ounces of alum in a quart of water, and brush the solution over the work before it dries. 2. Take a gallon of the above stain, add two more ounces of pearlash, hot, and brush often with the alum solution. 3. Use a cold infusion of archil, and brush over with the pearlash solution used for No. 1, *mahogany colour.* *Imitation of rosewood.* 1. Boil half a pound of logwood in three pints of water till it is of a very dark red, add half an ounce of salt of tartar; stain the work with the liquor while

boiling hot, giving three coats; then with a paluter's graining brush, form streaks with No. 8, black stain; let it dry, and varnish. 2. Brush over with the logwood decoction used for No. 6 black, three or four times; put half a pound of iron filings into two quarts of vinegar; then with a graining brush or cane, bruised at the end, apply the iron-filing solution in the form required, and polish with bee's-wax and turpentine when dry. *Yellow colour.* 1. Brush over with the tinoture of turmeric. 2. Warm the work, and brush over with weak aqua-fortis, then hold to the fire. Varnish or oil as usual.

WOOD-ASHES.—These consist chiefly of potass united to carbonic acid; and as this is found in almost all plants, its efficacy as an ingredient of the soil is obvious. A part of the effects of wood-ashes may be owing to the slow and gradual consumption of charcoal, which seems capable, under other circumstances than those of actual combustion, of absorbing oxygen, so as to become carbonic acid.

WOODBINE.—This favourite plant is peculiarly fitted to ornament rustic porches and summer-houses. It grows well in common soil, and is easily propagated by cuttings of ripened shoots, taken off in autumn, and inserted in a shady border, or by layers made at the same season of the year. The woodbine should be pruned and trained annually, when intended to cover arbours and seats, laying the shoots along their full length until they have covered the space allotted them. All straggling branches, which cannot be properly trained, must be cut off. When this plant is trained to walls, it must have a regular pruning and training, by going over it twice or thrice in summer, laying in the most convenient shoots, some at their whole length, and others shortened as required, to preserve regularity and a due succession of flowers. In winter-pruning, the superfluous shoots left in summer should be thinned out, shortening those which are too long for the space assigned them, especially when straggling and weak.

WOODCOCK.—A bird which breeds in



many parts of Britain, and, of late years, in

summer as well as in winter. The three essentials for the woodcock are solitude, shelter, and humidity; and its most favourite resorts for this purpose are the marshy woods to the north of the Baltic; and the farther north, so that the place be wooded, the better it is enjoyed by this bird, as, in those situations, the insect food is more plentiful, and the mud of the marshes is more exclusively the nest of the larvæ.

WOODCOCK POTTED.—Pluck and draw out the trail of six woodcocks, skewer their bills through their thighs, draw the legs through each other, and place the feet upon the breasts. Season the birds with mace, pepper, and salt. Put them into a deep pot, with a pound of butter, and tie a piece of stout paper over them. Bake them in a moderate oven, and, when done, lay them on a dish to drain. Then pot them, and pour all the clear liquor which the gravy yields upon them. Fill up the pots with clarified butter, and keep them in a dry place.

WOODCOCK RAGOUT.—Slit the birds down the back, but do not remove the entrails; stew them lightly with a little melted bacon-fat, season with pepper and salt, and a small quantity of mushroom ketchup. When done, add lemon-juice, and serve. Garnish with slices of toast and lemon.

WOODCOCK ROASTED.—Spit the birds without drawing them, dredge them with flour, and baste them well with butter; have in readiness a slice of toasted bread; lay this on a dish, and set it underneath the birds while roasting. When the woodcocks are done, take them up, place them on the toast, and serve on the dish, with good gravy and a garnish of lemon.

WOODCOCKS, TO CARVE.—Cut the bird right through the centre, from head to tail. Serve with it a piece of the toast upon which it comes to table.

WOODEN MODELS, TO FORM.—These are constructed roughly in deal, according to the desired design, and the various fine parts afterwards affixed with glue or brads. In forming the fine parts of the wooden model, a vast amount of unnecessary labour may be saved, and a better effect obtained, by burning much of the outline instead of carving it. By this plan, deeper tones of colouring, facility of operating, and saving of time and labour are the result. In common with other models, those constructed of wood, require the aid of lichen, moss, powdered slate, and colours to complete the effect. When water issues from the original cave, and it is desirable to copy it in the model, a piece of looking glass should be glued on to the stand, and the edge surrounded by glue, and paper covered with sand. Sometimes it is requisite to cut away the wood of the stand, so as to let in the looking-glass; this, however, is only when the water is supposed to be much lower than the surface of the land.

WOODRUFF DRINK.—A very agreeable beverage may be composed chiefly from the fragrant little plant called woodruff. The following is the method employed:

Put into a large deep jug a pint of light white wine, or a quart of red wine, and dissolve it in sugar till sufficiently sweet. Cut a sound China orange into rather thick slices, without paring it, and add it to the wine; then throw in several bunches of the woodruff. Cover the jug closely to exclude the air, and leave it until the following day. One orange will be sufficient for three pints of wine. The woodruff should be thoroughly washed, and drained quite dry before it is thrown into the jug; and a moderate quantity only of it should be used, or the flavour of the beverage will be rather injured than improved by it. Lemon-rind may be substituted for orange. The woodruff grows wild in Kent and Surrey, and flourishes in many suburban gardens, in the neighbourhood of London.

WOOL, PROPERTIES AND USES OF.—The term wool is now applied almost exclusively to the fleece of the sheep. It is chiefly used for two purposes; one of which consists of the stuffing for mattresses, chairs, sofas, &c.; and the other for numerous textile fabrics connected with domestic economy and personal attire. The composition of wool is nearly the same as hair.

WOOL, TO DYE.—*Blue colour.* Boil the wool in a decoction of logwood, and sulphate or acetate of copper. *Brown.* Steep the wool in an infusion of walnut-peelings. *Drab.* Impregnate with brown oxide of iron, and then dip in a bath of quercitron bark. If sumach he added, a dark brown colour will be produced. *Green.* First imbue with the blue, and then with the yellow dye. *Orange.* Dye first with the red dye, and then with the yellow. *Red.* Take four and a half pounds of cream of tartar, and four and a quarter pounds of alum; boil the wool gently for two hours; let it cool, and wash it the following day in pure water. Infuse twelve pounds of madder, for half an hour, with a pound of chloride of tin in lukewarm water, filter through canvas, remove the dye from the canvas, and put in the bath, which is to be heated to 100 degrees Fahrenheit; add two ounces of aluminous mordant, put the wool in, and raise to boiling heat. Remove the wool, wash, and soak for a quarter of an hour in a solution of white soap in water. *Yellow.* Cut potato tops when in flower, and express the juice; steep the wool in this for forty-eight hours.

WOOL, TO PURIFY.—Wool is apt to be infested with insects, and to contract various impurities. The process of purification consists of putting into three pints of boiling water a pound and a half of alum, and the same quantity of cream of tartar; these to be diluted in twenty-three pints of cold water. The wool is then to be immersed in the liquor, and left for four or five days, when it must be removed, washed, and dried. When this operation is completed, the wool will be perfectly clean, and no longer subject to be infested by insects.

WOOLLENS, TO CLEAN AND WASH.—In the washing of woollens, soft water must be used; and to make the necessary lather, a pound of soap must be put into a gallon of water, and boiled until quite dissolved; the

articles are then to be washed in two waters, as warm as can be borne, adding, from time to time, as much of the soap lather as may be needed. Wring the woollens out each time, then throw them into a clean tub, and cover them with boiling water. Let them remain until cool enough to admit of handling, then rinse them thoroughly, and wring them dry. It should be particularly observed, that the water used for rinsing must be hard. This method is applicable to any kinds of woollens; but for large and heavy articles, such as blankets, rugs, &c., it is preferable to omit the wringing. In all cases, the articles should be spread out perfectly straight and smooth. Another method is as follows:—Grate six or eight large raw potatoes into a pan or other deep vessel, pour on two gallons of cold spring water, and let it remain undisturbed for forty-eight hours; then pour off the water clear into a capacious pan or tub, and take care that no portion of the sediment miungles with the water. Dip the articles into this clear liquid, and pass them to and fro in such a manner that they cannot become creased. Rubbing must be wholly avoided. By this process, woollen articles will remain perfectly smooth, and need no ironing, an operation which injures the colour of woollens. When thoroughly clean, hang them on a line to drip, and, when half dry, turn them, and if they require straightening, pull them out. When perfectly dry, their appearance will be improved by folding them, and placing them under heavy pressure for some hours. If the articles are greasy, but half the water should be used at first, and the remainder reserved for a second rinsing. If the colours of the articles are of a delicate nature, the potatoes used should be carefully pared previous to scraping.

WOOLLENS, TO PRESERVE.—When woollen articles are not in use, they may be preserved, first by drying them before a fire, then letting them cool, and afterwards mixing among them bitter apples, sewn in muslin bags, and placed between the folds of the articles.

WOOLLENS, TO REMOVE INK-SPOTS FROM.—First rub the spots with a composition, made of the white of an egg, and a few drops of oil of vitriol, properly incorporated; then immediately wash the part with pure water; and, lastly, smooth the fabric in the direction of the nap, with a piece of flannel, or white woollen cloth.

WORK, BEST METHOD OF DOING.—The law of order requires to be duly combined with the law of work, else we shall walk at hap-hazard, hindering our own usefulness, and irritating the feelings of others. There may be much diligence and zeal without order, but there can be only partial success. To do things in order, appears to be a thing of easy attainment, belonging to the essentially commonplace and uninteresting elements of work; hence, it is so frequently neglected, and any admonitions on the subject are generally received with weariness, if not contempt. Those, however, who have known the sadness of failure in their

work, without any apparent cause—unless it be a want of due regularity and design—will be convinced that there is a necessity for method, punctuality, earnestness, patience. *Method.* The very idea of living by rule is frightful to many, especially to those who pine themselves on possessing something of "genius," which they consider incompatible with method. Now if genius has accomplished much in the world without method, doubtless it would have accomplished much more with it; while those who have neither genius nor method will find themselves in but a melancholy plight. When we rise in the morning to the light and the work o' a new day, unless we have some rules of action; unless we know what we have to do, and when it is to be done; unless we have the hours parcelled out in some measure, so that we need not waste large intervals in arranging and discussing; we run great risk of having our duties ill-balanced—giving undue space to the work that we like, and crushing into a corner the work that we do not like. While we allot, as far as possible, the different duties for the different hours, it is well to leave some but partially filled, to meet the emergencies of unexpected claims, reserving some lighter employment for these "corners of time." *Punctuality* is essential to method, but a distinction is here made between the two, because with some degree of growing method, as regards our own duties, we may yet be heedless regarding the work and the method o' others. Time is a gift, and if we choose to undervalue and misapply our own portion, we certainly have no right to appropriate what belongs to those around us. Yet, when we forget to keep an appointment, when we arrive an hour too late for the work to be done in concert with others, we have robbed our neighbours o' time that might have been usefully and profitably occupied. In some cases, this is tantamount to the crime of stealing silver and gold, for to many, time is money; to artisans and tradespeople especially, the want of punctuality is a positive injustice; and yet, how little is this social sin guarded against! *Earnestness.* Do not aim at more than you have strength or opportunity for; but what you attempt du well; it is better to do one duty thoroughly than half a dozen superficially. There is nothing too small to be done thoroughly, no work so insignificant that we can say "It is of no consequence how I do it." This thorough spirit will prevent procrastination—there will be no putting off till to-morrow the duty to be done, or the difficulty to be grappled with, which, with each succeeding day will grow more distasteful and more burdensome; it will also prevent the opposite tendency to undue taste, and the anticipation of future duty, when we ought to be absorbed in the present. *Patience.* If you measure your work by the work of others, you will grow impatient; they seem to do so much more, and to succeed so much better; but Providence has assigned to you one kind of work, and one kind of discipline in that work; to them it has given another,

and it belongs not to you to judge which is the more useful, while the more successful. If you are over-anxious that the fruit of your work should look well to the world's eye, you will grow impatient speedily; but remember that the outside may be fair, while the inside is imperfect, and the imposture must one day be detected.

WORMS.—There is no enemy assailing the health and comfort of childhood so frequently and so injuriously as worms; and though all ages of life may be affected by them, it is principally in youth, and from the age of twelve months to that of twelve years, that these parasites are most frequently encountered. There are four kinds of worms usually found infesting the human body. 1. The *ascarides* or thread-worms, so called from their extremely thin bodies and thread-like appearance, almost always white, and bearing a not unapt resemblance to bits of white thread. These worms are almost always found in the straight or last intestine, the *rectum*, and are the species common to infancy and early childhood. 2. The *lumbrici* or long round worms, sometimes called the belly worm, and closely resembling the common earth worm. These parasites usually inhabit the small intestines and stomach, or the commencement of the bowels, as the ascarides do the termination of them. The lumbrici are most frequently met with in children between four and twelve years, and at any after period of life. 3. The *trichurides* or three-tailed thread worms, a reptile closely resembling the ascarides or thread worms, with the difference of having long hairy processes proceeding from their anal extremity. This variety of worm is most frequently met with in young children, and inhabits what is called the *cæcum* or blind intestine, being situated at the point where the small bowels terminate in the large ones; and between the ascarides and lumbrici. 4. The *tania* or tape-worm, the most troublesome and dangerous in its consequences, of all the parasites infesting the human body. The tape-worm, as its name implies, is, in appearance, strongly suggestive of a very long piece of the narrowest tape, being flat in its whole length, and, to a superficial observation, appearing to have neither head nor tail. This worm, though occasionally found in childhood, is much more frequently discovered in middle age, and in both sexes, but unlike the other varieties, which may be said to have a local habitation, and beyond which they seldom stray, the tape-worm is found indifferently in every part of the alimentary canal, from the stomach to the rectum; and, in consequence of its length, nature, and organization, not only gives rise to the most opposite and alarming symptoms, but is, at the same time the most difficult to kill or expel when its presence is at last detected. The existence of worms is usually denoted by the following chain of symptoms. Loss of appetite, restlessness, head-ache, pains in the stomach, foetid breath, disturbed sleep, grinding of the teeth, itching and irritation in different parts of the body, inducing the child to pick the nostrils and scratch. The

body becomes emaciated, and the belly or abdomen large and tumid, the tongue is often of a bright red, or covered with a slimy mucus, the surface is either chilly or feverishly hot, the countenance is frequently pale, with a contracted expression on the features, the eyes especially having a sunken and peculiar character about them; at the same time there is usually a short dry cough, with either a ravenous desire for food, or a total apathy as to eating. The treatment of worms depends, in a great measure, on the nature and variety of the worm present; for the *ascarides* or thread-worms, inhabiting the rectum, and *trichurides*, or those in the blind intestine, the ordinary purgatives are such as are combined in the following prescription, or a dose or two of castor oil. Take of

Scammony, powdered . . .	12 grains
Rhubarb, powdered . . .	6 grains
Jalap, powdered . . .	9 grains
Calomel	6 grains

Mix, and divide into six powders. For a child of two years old, one of these should be given every morning for several successive days, till the system has been cleared of their presence. For an older child, according to the age, the strength of two, or even three of the above powders should be given for a dose. The *lunbrici* or round worms, lying in the small intestines, and forming themselves perfect nests or beds of thick slimy mucus, in which they congregate and adhere to the coats of the bowels, require a different and more energetic treatment, and this should commence by giving the child frequent draughts of lime-water, for some two or three days, which has the effect of dissolving the mucus in which they live, and that adhering to their bodies, leaving their unprotected skin to the assault of the next remedy. This should consist of an electuary made of powdered tin and treacle, or cowhage and honey, a teaspoonful of either of which should be given twice a day for two or three days, to be followed up by one or more doses of a strong aperient powder such as the one above; or when the child is old enough to take it, a dose of salts and senna, to complete the process; the first remedy destroying their nests and slimy covering, the second, by the sharp points or spiculae of the grains of tin, or needle-like points of the cowhage, piercing the unprotected bodies of the worms as by hundreds of darts; and thereby killing them; and the third, by means of its active operation, expelling the whole from the body. Worms are sometimes destroyed by means of infusions of the herb known as Indian pink, wormwood, rue, and several other bitter drugs, each succeeded, after some days' use, by a dose of purgative medicine. The treatment adopted for the expulsion of the tape-worm is very various; and, when its existence is tolerably certain, should commence with daily doses of the male fern, followed on the fourth day by a powder composed of a scruple of jalap and five grains of calomel. If this does not effectually expel

the worm, a dessertspoonful of turpentine is to be given on an empty stomach the first thing in the morning and an hour or two before the patient rises; and two hours after the turpentine, a large tablespoonful of castor oil is to be given, or else the above powder. This treatment is to be repeated every other day, till the tape-worm is expelled. The doses in the case of the tape-worm are for an adult.

WORMS, IN GARDENS, TO DESTROY.—Water the beds with a strong decoction of walnut-tree leaves where there are worm casts; the worms will immediately rise up out of the earth, when you may easily cut them to pieces, and fatten your poultry therewith, or feed fish in ponds with them. By laying ashes or lime about any plant, neither snails nor worms will come near it. As the moisture weakens it, you must, more or less, continue to renew the lime or ashes.

WORMS, IN HORSES.—The best remedy for this disease is the following:—Take a quart of new milk, and half a pound of honey; mix, and administer it to the horse in the morning; give no food for an hour and a half afterwards; and, at the end of that time, administer a pint of salt and water, succeeded by another fast of an hour. Repeat this treatment on three or four successive mornings, and the worms will be destroyed.

WORMWOOD.—An indigenous perennial plant met with on waste places, but that which is intended for medical use is mostly cultivated. For this purpose, the upper part of the stem, with the leaves and unexpanded flowers, should be collected, for these parts possess the peculiar aroma, with



a strong bitter taste; while the lower part of the stem is merely aromatic, and devoid of bitterness. Wormwood possesses the properties common to aromatic bitters, but

it seems to possess, also, some peculiar ones rendering it worthy of more attention than it receives.

WORSTED ARTICLES, TO WASH.—Take half the weight of soda that there is of soap; boil them with water, allowing a gallon to every pound of soap, and use it when perfectly cold. Wet the flannels in cold water, then wash them in fresh cold water with some of the boiled mixture amongst it; wash them in this, changing the water till they become perfectly clean; then rinse them well in cold water, and dry them in the shade. Worsted stockings washed in this manner will be made quite clean; but particular care must be taken to wet them in clean cold water previous to washing them in the cold suds. Blankets should be washed in this way also, and when nearly dry, frequently shaken, to raise the pile and to make them soft. All dirty clothes should be laid in cold water the night before being washed.

WOUNDS.—These are of various kinds, such as cuts, stabs, tears or rents, scratches, &c. An ordinary cut with a knife, chisel, axe, or other edged instrument, is, generally speaking, not attended with any serious consequences, provided the person wounded be of temperate habits and unexcitable disposition. In such case, the wound must be carefully cleaned from all dirt or other foreign matter, and dabbed with a sponge dipped in cold water, till the bleeding ceases. If the wound be extensive, it may be left open for half an hour, and then the corresponding edges are to be brought together as perfectly as possible, and while thus held, several strips of plaster are to be laid across the wound, with small spaces left between them alternately, so as to admit of the escape of an oozing fluid, which often continues for some hours. The edges of the wound should not be dragged tightly together, but merely kept in place by the plaster, and if the wound be in the finger, toe, arm, or leg, it is better that the ends of the plaster should not overlap. If common sticking-plaster be not at hand, court-plaster will do; or thin bands of tow may be wrapped round the part, and smeared with gum-water. Or, if nothing else is at hand, a bit of linen rag, by absorbing the blood, constitutes itself a plaster as the moisture dries. In other cases, the parts may be sewn together with a strong needle and silk, as many single stitches being employed as are necessary for that object, and no more. The needle, well oiled, should be thrust well through the skin, and each stitch should be secured by a knot. The stitches may be taken out in about twenty-four hours, by carefully cutting the thread on one side of the knot, and gently withdrawing the other end. The dressing is to be left on for several days, unless the wound grow painful, and throb violently; in which case, it is to be removed by the aid of warm water or a soft poultice. If a piece of flesh be cut out, wash it, and the part from which it was cut, without a moment's delay; replace into its precise position, and keep it there with a piece of sticking-plaster. If the piece cannot

be replaced, bathe the part with cold water until the bleeding stops, and place over it a piece of soft linen. *Lacerated or torn wounds* are such as may be produced by a sharp-edged heavy piece of wood, iron, or stone, falling on a part. The first thing to be done is, to endeavour to unite the edges by the aid of plaster, as in a clean cut; but if the part be much bruised, this mode of treatment rarely succeeds; a slough or core forms, and this must be separated before the wound can heal. In such cases it is best to apply a bread and water poultice first, in order to moderate the inflammation: and as soon as suppuration commences, and the extent of the slough is marked, a poultice of linseed-meal must be employed, and continued not only until the slough has come away, but till the gap is filled up by new flesh. When the new flesh rises above the edges of the wound, it is commonly known by the name of proud flesh; this should be suffered to remain, for it assists in the healing of the wound, instead of retarding it, as is very commonly supposed. When the wound has thus far progressed towards healing, the poultice may be discontinued, and the part tightly bound with strips of adhesive plaster or a linen bandage moistened with cold water, and bound round twice or thrice, will often answer the purpose. A torn or rent wound, such as may be caused by a hook or nail, frequently assumes a very serious character, and requires much care in its treatment. If the skin be merely torn without being stripped, the torn edges may be tenderly brought together with a piece of plaster, and a poultice afterwards applied. But if the skin be strapped up, then, after gently washing with warm water, the skin should be laid down in its place as nearly as possible, a single strip of plaster put across to confine it, and the whole covered with a bread and water poultice. The poulticing must, in either case, be continued till the slough of the torn edge or of the larger piece of skin has separated, and till the new flesh has formed, after which the wound must be treated as an ordinary sore, with poultice or dressing, as best suits. A distinct mode of treating this class of wound when it assumes aggravated proportions, is as follows:—Bind up the wounded parts with isinglass plaster, and place over it a light bandage; after which, cause a stream of water, at ninety degrees, to run slowly over the injured part, so as to reduce the temperature to slightly below that of the blood. A vessel containing water, heated to more than a hundred degrees, is then to be placed above the level of the wound, and, by fixing a tap in this, and turning it very slightly, a gentle stream of water may be conducted to the wound, and this being laid in a water-proof cloth, admits of the water being conducted from it to any convenient receptacle. In very serious cases, the stream of water may be continued for three or four days and nights, the temperature being regulated according to the sensations of the patient. After this, if the parts suppurate to any extent, and exhibit considerable slough-

ing, a poultice of linseed meal must be employed until the wound becomes clean. The principal danger of a stab is lest some important deeply-seated part be injured. The patient should be placed in bed as soon after the occurrence as possible, and perfect rest and quiet enjoined. The bleeding is to be stopped by cold water from a sponge, and the edges of the wound, if superficial, are to be brought together with strapping and bound up. In deep-seated stabs, however, it is better not to attempt to bring the edges together, but rather keep them asunder; and lay a rag over the wound, dipped in cold water, and changed every half hour. If inflammation set in, ferment with cold water for a day or two, then with warm water, and finally apply poultices. A stab will not heal so readily as a cut, because it often unites near the surface, whilst the seat of the wound is suppurating; and therefore, although for some days it may appear to be progressing steadily, yet it then becomes painful, the wound opens and discharges freely. This may occur once or twice before a cure is completed. *Scratches* are shallow rents not penetrating through the skin, and although commonly unheeded as not requiring attention, are, nevertheless, capable of producing serious results, if irritated by poisonous matter, or filth of any kind. These minor wounds, therefore, are not to be neglected, but should be covered and protected, and kept clean and dry until they have completely healed. If inflammation should set in, leeches must be applied to the adjacent swollen parts; and if leeches are not procurable, then the injured parts may be cut in several places with a clean sharp instrument, and poulticing afterwards resorted to. The latter instructions are chiefly applicable to cases where the services of a medical man are not available; but when the assistance of a surgeon can be obtained, it should be sought for immediately a wound of this nature exhibit any suspicious appearances. *Punctured wounds* are usually produced by a splinter, or a thorn, and being in the first instance of a trivial character, are commonly disregarded; but a punctured wound, like a scratch, may, if neglected, be sometimes attended by very alarming consequences. The first thing, in these cases, is to remove the splinter or thorn; but this must be done very tenderly, and with as little squeezing and pressure as possible; and the operation may be further assisted by the application of a poultice. If the intruder obstinately refuse to come away, the better plan is to make a cut with a knife or a lancet, along the course which the splinter or thorn appears to have taken, so as more completely to expose it, and allow of its being more easily grasped. Anglers often meet with this kind of accident by catching the fish-hook in their flesh. The readiest and least painful mode of extrication is, to grasp the stem of the hook tightly, and, with a sharp knife, rip off the line, and clear the stem of the binding-silk; then to press the stem of the hook downwards, so that the point shall be made to travel onward till it penetrates the skin, and free the barbed

point, which is then to be taken hold of and drawn further out, in such a manner that the remainder of the hook follows through the last-made wound. This is a much better plan than the ordinary one of withdrawing the hook by the wound through which it has entered; and, if properly performed, does not occasion any pain or inconvenience beyond a few hours' smarting. If, however, the puncture should remain painful, a poultice must be applied. *Gun-shot wounds* demand, in the first instance, the removal of any pressure that may be upon them, and the air must be allowed to come freely to the injured part. If a fleshy part be wounded, sponge and bathe it well with water, to stop the bleeding, and to cleanse the wound; then apply a piece of lint, crossed by strips of plaster. A few spoonfuls of wine or spirits may be given to the patient, to allay his agitation. Afterwards, wet a few folds of linen with a simple lotion, apply it to the part, and cover with a light bandage. The patient must be kept perfectly quiet, and confined to his bed. A few days subsequently, the cloths should be moistened with warm water and removed. Inflammation will now have set in, and the wound must be dressed with cold water, provided the patient can tolerate the chilly sensation produced. On suppuration being well established, mild and slightly stimulating lotions must be applied, or poultices and bandages. When suppuration takes place beneath, it must be allowed egress by the knife, if poultices are not effectual; the accumulation may be often prevented by compression. Low diet, aperient medicines, and a state of quietude, are great assistants to recovery. Pieces of clothing or wadding should be carefully extracted from the wound.

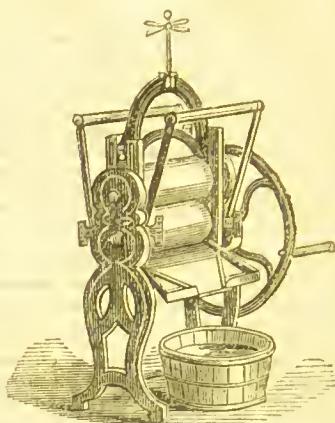
WOUNDS, IN HORSES.—Injuries of the joints or limbs, or superficial wounds, as they are termed, from thorns, splinters or other sharp bodies, are sometimes followed by a slight discharge, which, if abruptly stopped by medicine of repelling or disquietant quality, will generally produce considerable inflammation, with other bad symptoms. In all such wounds, emollient fomentations should be employed, together with a poultice of bread and milk, or of oatmeal and the refuse of strong beer. Wounds of the skin will generally be cured by the simple application of lint, dipped in friars' balsam. All wounds, except gun-shot wounds, should be well cleansed with warm water, and the parts fomented with cloths wrung out in the water; if the wound be deep, a syringe and warm water must be employed. When swellings happen on the back, or the withers, from bruises of the saddle, the following lotion should be applied twice a day:—Spirit of wine, four ounces; camphor, two drachms; bole armenian, one drachm. Mix these ingredients thoroughly, and rub a portion of the mixture on the affected part, afterwards binding round some wetted lint or tow.

WOW-WOW SAUCE.—Chop parsley-leaves fine; take two or three pickled cucumbers or walnuts, divide them into

small squares, and set them by in readiness; put into a saucepan a piece of butter of the size of an egg. When it is melted, stir into it a tablespoonful of flour, and half a pint of beef broth; add a tablespoonful of vinegar, one of mushroom ketchup, a tablespoonful of port wine, and a teaspoonful of made mustard; simmer this mixture till it is of the desired consistence, put in the parsley and pickles to warm, and pour the sauce over the beef which has been stewed or boiled.

WREN.—A sprightly little bird, common in England, and to be seen on the wing in our severest winters. Its length is about three inches and a half. The bill is slender and slightly curved; upper mandible and tips of a brownish horn colour, the under one, and the edges of both, of a dull yellow; a whitish line extends from the bill, over the eyes, which are dark hazel; the upper parts of the plumage are clear brown, obscurely marked on the back and hinder parts with narrow, double, wavy lines of pale and dark brown colour. During the winter season, this little bird approaches near human habitations, and takes shelter on the roofs of houses, barns, and haystacks; it sings till late in the evening, and not unfrequently during a fall of snow. In the spring, it betakes itself to the woods, where it builds on the ground, or in a low bush, and sometimes on the turf, beneath the trunk of a tree, or in a hole in the wall. The wren may be domesticated and reared in the following manner:—Take the young birds when they are nearly fledged, and place the nest in a little basket with covers, and nearly filled with moss, which keeps the birds warm; feed them with moist bread and bruised hemp-seed, mixed together, and small bits of raw meat mingled with the moss. A little bread and milk may be also given them, and the yolk of an egg boiled hard; a few drops of water should also be let fall into the birds' mouths occasionally. The birds require to be fed several times a day, giving them as much as they will take at each time. They must also be kept clean, for if allowed to get dirty, they will not succeed. As soon as the feeding is finished, the covers of the basket must be shut down; and the birds will, in a few days, learn to peck, and to feed themselves. When they are perfectly fledged, a little fine gravel should be mixed with their food, as this is converted into lime, and in that capacity hardens the bones, and prevents the cramp. The house-wren greedily devours the various insects which commit depredations in gardens, and may thus be rendered useful to man. To encourage the wren to establish himself in a garden, or about a house for the above-named purpose, a small box should be fixed on to the end of a long pole, and placed in the most convenient position. In these boxes the birds will build and hatch their young; and when hatching is finished, the parent bird feeds its little ones with a variety of insects which it finds near its abiding place. By this simple means, an incalculable number of insects will be destroyed, and a commensurate amount of good effected.

WRINGING MACHINE.—An implement used in the laundry for the purpose of economising manual labour. The machine seen in the engraving is one of the best of



this class; it consists of rollers, between which the linen, &c., is put, and these rollers are pressed tight by the action of a wheel, which is moved by the hand. In this manner the heaviest and most bulky articles may be wrung completely dry, in a much shorter space of time, and with considerably less labour than when performed in the ordinary way.

WRIT.—When a person cannot obtain payment for a debt due to him, and thinks it worth his while to enforce payment, he may take out a writ against the debtor. This is a summons to the defendant to appear on a certain day and answer the complaint of the plaintiff, or judgment will be given against him, so that his goods may be seized or himself arrested to satisfy the claim. A writ may be also obtained by any person who imagines he has received an injury from the alleged offender. All actions are now commenced by writ of summons. A writ is demandable by common right, and any delay in granting it, or setting an exorbitant price upon it, would be a breach of Magna Charta.

WRITING, ERRORS IN.—The following rules will be found of great assistance in writing, because they relate to a class of words about the spelling of which doubt and hesitation are frequently felt:—All words of one syllable ending in *l*, with a single vowel before it, have double *l* at the close; as *mill*, *sell*. All words of one syllable ending in *l*, with a double vowel before it, have only one *l* at the close; as *mail*, *sail*. Words of one syllable ending in *ll*, when compounded, retain but one *l* each; as *fuſil*, *skſil*. Words of more than one syllable ending in *l* have one *l* only at the close; as *delightful*, *faithful*; except *befall*, *downfall*, *recall*, *uncell*, &c. All derivatives from words ending in *l* have one *l* only; as *equality*, from *equal*; *fullness*, from *full*; except they end in *er* or *ly*; as, *mill*, *miller*; *full*, *fully*. All participles in *ing* from

words ending in *c* lose the *e* final; as, *have*, *having*; *amuse*, *amusing*; unless they come from verbs ending in double *e*, and then they retain both; as, *see*, *seeing*; *agree*, *agreeing*. All adverbs in *ly*, and nouns in *ment*, retain the final *e* of the primitives; as, *brave*, *bravely*; *refine*, *refinement*; except *acknowledgment* and *judgment*. All derivatives from words ending in *er* retain the *e* before the *r*; as, *refer*, *reference*; except *hindrance*, from *hinder*; *remembrance*, from *remember*; *disastrous* from *disaster*; *monstrous*, from *monster*; *wondrous*, from *wonder*; *cumbrous* from *cumber*, &c. Compound words, if both end not in *l*, retain their primitive parts entire; as, *millstone*, *changeable*, *raceless*; except *always*, *also*, *deplorable*, *although*, *almost*, *admirable*, &c. All one-syllable words ending in a consonant, with a double vowel before it, have a single consonant in derivatives; as *sleep*, *sleepy*: *troop*, *trooper*. All words of more than one syllable ending in a single consonant, preceded by single vowel, and accented on the last syllable, double that consonant in derivatives; as *commit*, *committor*; *compel*, *compelled*; *appal*, *appalling*; *distil*, *distiller*. Nouns of one syllable ending in *y* preceded by a consonant, change *y* into *ies* in the plural; and verbs ending in *y*, preceded by a consonant, change *y* into *ies* in the third person singular of the present tense, and into *ied* in the past tense and past participle; as *fly*, *flies*; *I apply*, *he applies*; *we reply*, *we replied* or *did reply*. If the *y* be preceded by a vowel, this rule is not applicable; as *key*, *keys*; *I play*, *he plays*; we have *employed* ourselves. Compound words, the primitives of which end in *y*, change *y* into *i*; as *beauty*, *lovely*; *loveliness*.

WRITING, FADED, TO RENDER LEGIBLE.—Put six bruised gall-nuts into a pint of white wine: set the vessel, containing these, in the sunshine for forty-eight hours. Dip a brush into the infusion, and pass it over the writing several times, until it appears sufficiently distinct to admit of being deciphered.

WRITING, TO OBLITERATE.—Recently written matter may be completely removed by the oxymuriatic acid (concentrated and in solution). Wash the written paper repeatedly with the acid: and afterwards wash it with lime-water, to neutralize any acid which may be left. The writing will be thus removed. If the writing is old, the preceding process will not be sufficiently efficacious, owing to the change which the ink has undergone. In such a case, the writing must be washed with sulphate of ammonia, before the oxymuriatic acid is applied. It may be then washed with a hair pencil.

WRITING FOR THE PRESS, DIRECTIONS FOR.—It would be a great favour to editors and printers, should those who write for the press observe the following rules. Write with black ink, on white paper, wide ruled. Make the pages small, one-fourth that of a foolscap sheet. Leave the second page of each leaf blank. Give to the written page an ample margin all round. Number the pages in the order of their succession. Write in a plain bold hand, with less respect to beauty. Use no abbreviations which are

not to appear in print. Punctuate the manuscript as it should be printed. For italics underscore one line, for small capitals two, capitals three. Never interline without the caret to show its place. Take special pains with every letter in proper names. Review every word, to be sure that none is illegible. Put directions to the printer at the head of the first page. Never write a private letter to the editor on the printer's copy, but always on a separate sheet.

WRY-NECK.—This is an involuntary and fixed inclination of the head towards one of the shoulders, and the consequence of an unnatural contraction in one of the muscles attaching the chin and neck to the breast-bone and shoulder, and can in general be only cured by dividing the rigid muscle in a transverse direction, and sometimes by removing a portion of the muscle, so as to prevent the possibility of a reunion of the severed fibres, in which case the mischief would be reproduced.—See NECK, DEFORMITIES OF.

Y.

YAM.—A slender herbaceous vine, having large tuberous roots, and producing a fruit much used for food in the East and West



Indies. Yams may be eaten either roasted or boiled; they are mealy, palatable, nutritious, and easy of digestion; and the flour may also be used either for bread or for puddings.

YAWNING.—Although an ordinary sign of sleepiness and fatigue, yawning is frequently caused by a weak and disordered stomach; and sometimes amounts to what

may be termed fits of yawning. The principal danger to be apprehended, is dislocation of the jaw, and persons when thus attacked should be cautious to guard against this catastrophe.

YEARLY ROUTINE, FOR THE GARDEN.—Under the heads of the several months detached instructions will be found for the culture of the kitchen and flower garden. The object of the present article is to collect at one view, a few leading hints applicable to general garden culture, and to the year, taken as a whole, as follows:—

JANUARY. In this month but little can be done; the walks should be swept and the beds kept clean, so that all may have as neat an appearance as possible. In the *kitchen garden*, weather permitting, sow early peas in a sheltered border, early mazagan and long-pod beans; in the first and fourth week, short-topped radish; towards the end of the month, cos and cabbage lettuce. Transplant early York cabbage and lettuce. Earth up savoy, brocoli, &c.; also peas and beans, if any have made their appearance. In the *flower garden* the attention is to be chiefly directed to increasing the stock of potted flowering plants, some of which will require the assistance of a slight hot-bed to bring them forward.

FEBRUARY. In the *kitchen garden*, repeat the sowing of mazagan and long-pod beans. Sow Windsor beans in the last week; short-topped and salmon radish, spinach, mustard and cress twice; early York, sugar-loaf, and red cabbage near the end of the month. In the *flower garden* the operations are materially influenced by the state of the weather. If cold and wet, very little can be done in the open garden, except protecting the bed flowers; but if the weather be open and partially dry, the sowing of annuals may be attended to, as also the transplanting of some of the biennials and perennials. An extra bed of ranunculus, and anemones may be put in to follow those planted in autumn; and all bulbs and tubers still left out of the ground, may now, especially the hardiest sort, be planted safely anywhere. A slight hot-bed will be required to raise seedlings of various sorts of annual flowers, and receive seedlings of former sowing. Any rough work may be performed during this month.

MARCH. In the *kitchen garden*, most of the common sorts of seeds may be now sown in sheltered borders, if the ground be in a fit state. Turnips and radishes will require a warm bed, sea-kale should have its shoots blanched, and Jerusalem artichokes may be planted. The seed of Brussels sprouts should be sown as well as that of savoy, brocoli, and successions of peas and beans. In the *flower garden*, there is much to be done this month; all the operations of the previous month should be continued. The bed-flowers, particularly tulips, must be sheltered from hail-storms and frost. All the plots and borders must be smoothed with a rake, preparatory to sowing the first general crop of hardy annuals. Dahlia seed may now be sown in pans, and the old tubers placed on dry leaf-mould on a mild hotbed, or on a

bark bed in a stove, peg down roses and finish the pruning of them, lay some and take off suckers; slip and part roots of various plants.

APRIL. In the *kitchen garden*, conclude any of last month's operations which have been left unfinished. Sow peas, beans, cabbages, savoys, lettuces, small salad, spinach, leeks and onions. Plant potatoes, rhubarb, sea-kale, &c. Hoe and thin turnips, spinach, and all drilled crops which stand too thick. In the *flower garden*, the work calls for an equal amount of activity. Tulips and hyacinths require support and shelter from the wind, shading from the sun, and protecting from heavy rains. Many seedlings, which have been kept in frames will be fit for transplanting. Another sowing of annuals, both hardy and tender, must be made towards the end of the month. Seeding dahlias, and all the tender annuals, require attention at this time to bring them forward. Cuttings of dahlias, and the slips or cuttings of Chinese chrysanthemums must be brought forward by potting singly, and keeping them on a little heat till fairly rooted.

MAY. In the *kitchen garden*, sow successions; towards the end of the month, plant out celery in drills. Plant out camillifers under glasses; sow turnips, kidney beans, scarlet runners, and colewort. Plant late potatoes, and transplant cabbage. Hoeing is greatly required this month to thin crops, destroy weeds, and loosen the surface. Thin out carrots, turnips, parsnips, &c. The *flower garden* still demands an unusual amount of energy. Sow another succession of hardy annuals and biennials, and thin and transplant some of those which had been sown in previous months. Tender annuals, dahlias, chrysanthemums, &c., lately potted and in frames, must be guarded by mats against the cold nights and biting winds, and likewise shaded from the mid-day sun. All stage and bed-flowers now demand attention in shading, propping, and defending from insects. Carnation seed may be sown. A small bed of ranunculus may be planted to flower in August, and new beds of violets made. Rose trees may be now pruned back, and other shoots cut back.

JUNE. In the *kitchen garden*, the watering of newly-planted vegetables is, in this month, highly necessary; and, after watering, the application of the hoe. Remove cabbage-stalks not required for sprouts, and all decaying crops. Gather herbs for drying, just before they get into full flower. Sow turnips for autumn use, and endive for main crops; also vegetable marrows, gourds, and pumpkins. Plant more late potatoes, if required. Cabbages, savoys, &c., may be placed in rows to stand. In the *flower garden*, all the more tender kinds of flowering plants may be planted abroad with impunity. Dahlias must now, if not done already, be placed in their blooming stations: short stalks are indispensable for their support. Pot off seedlings, if not already done. Auriculas may now be shifted; and tulip, hyacinth, and ranunculus beds will still require attention. Carnations now need careful nursing. Con-

tinue to plant out tender annuals, and as many greenhouse plants as can be spared to add to the gaiety of the gardeu; transplant annuals previously sown and standing too thick; sow biennials, and propagate by cuttings every plant of which a supply may be wanted.

JULY. In the *kitchen garden*, remove the haulms of peas and beans immediately they cease to be useful, as they tend to exhaust the ground and to harbour slugs and snails. Sow endive and small salads twice, lettuce turnips for succession, and cabbage for winter coleworts. Earth up brocoli, cabbage, and potatoes. About the middle of the month, sow the last crop of peas and French beans; earth up and stake the preceding ones. Plant celery, tie up lettuces and endive, and execute whatever was omitted last month, or may be properly performed in preparation for the next. In the *flower garden*, all omissions of the preceding month should be remedied without delay. Take up bulbs and tubers when the leaves are withered; sow and transplant annuals to bloom late; propagate pinks, rockets, carnations, &c.; divide auriculas, and re-pot them, keeping them shaded as well as all other plants in pots. Propagate pansies by division; sow biennials; prop Chinese chrysanthemums, and lay down some of the long shoots, to make bushy plants of the tops. Regulate the patches of previously-sown annuals, and shift those of the greenhouse or stove.

AUGUST. In the *kitchen garden*, protect cucumbers from heavy rains, which sometimes occur in this month. Sow in the first week early York, dwarf, and sugar-loaf cabbage; in the third or fourth week, cauliflower, onions, prickly-seeded spinach, radish, and lettuce. In dry weather, earth up celery in trenches, and all other crops in drills or rows. Transplant cabbage, savoys, brocoli, borecole, Brussels sprouts, and endive. Plant out brown Dutch lettuces, taking precautions against the ravages of slugs, and brocoli for the successions in spring. In the *flower garden*, if any bulbs which have done flowering yet remain in the ground, they should now be taken up, dried, and stored in a safe place. Cuttings of azaleas and similar plants may be put in. Roses may be budded. Another bed or two of pansies should be formed, to bloom before the frost sets in. Mignonette should be sown in pots and window-boxes, to stand the winter in frames. Chrysanthemums, dahlias, and all other tall and climbing plants should have supports; carnations, whether on stage, bed, or border, neatly tied up and shaded, and layering for next year's stock furnished.

SEPTEMBER. In the *kitchen garden*, take up potatoes to stand the winter, sow onions, lettuce and carrots; small salad twice; radishes for the last crop. Gather seeds as they ripen. Prick out cauliflowers; also lettuce and endive under shelter. Transplant coleworts and the last crop of brocoli. In the *flower garden*, there is during this month, much irregularity of growth, and decayed flowers and stems; leaves require

to be cleared away. The seedlings of biennials and perennials should be thinned, and some of them planted in pots, or transplanted to beds or places where they are intended to remain. All cuttings, pipings or layers, which are sufficiently rooted, should also be removed to their final or temporary stations. Seeds of fine annuals, now ripe, should be gathered and saved; and valuable greenhouse plants which have flowered in the borders should be now re-potted. It is now proper time to prepare the beds intended for tulips, hyacinths, and ranunculus, in order that they may be properly settled by planting time.

OCTOBER. In the *kitchen garden*, if the weather be favourable, continue to take up potatoes, carrots, parsnips, and beet. Blanch endive, and earth up the stems of all crops in rows; lay down brocoli, and hoe out winter spinach. Sow early peas and marjoram; beans to stand the winter, also lettuce, on warm borders. Transplant cabbage, a full crop, for spring supply; also lettuce and endive in frames. Cut down asparagus and dress the beds with litter or short dung. Dig, trench, and execute all routine work. In the *flower garden*, stake dahlias firmly against the wind. If any new seedlings have not yet flowered, and are expected to prove excellent, they should be guarded by some temporary covering, to escape being nipped by some unexpected night frost. Chinese chrysanthemums standing in open borders are in the same predicament. Pinks may be still bedded out, and carnation layers potted. These last, together with all flowers in pots, must be duly supplied with water. About the end of the month, prepare a heap of light, fresh, sandy loam, and a sufficient number of proportioned pots for the reception of as many bulbs and tubers as may be required for early and late forcing; prepare, also, the beds for tulips, hyacinths, anemones, and ranunculus, to be planted about the beginning of next month. Dig the clumps or pots intended for the hardiest sorts of bulbs and tubers, which now require to be put in, namely, narcissus of sorts, snowdrops, scillas, aconite, &c. Pot roses, Persian lilac, and the different sorts of American shrubs and other flowers to go into frames. Perennials may be taken up, parted, and replanted; some of the more showy sorts may be potted to go into frames to advance their flowering in spring. Rosaries may be pruned and regulated, laying down the long shoots and straggling branches, keeping the whole pretty close to the ground. Standard roses require to be closely pruned and well staked.

NOVEMBER. In the *kitchen garden*, this is the most desirable month in the year for pruning and transplanting fruit trees and bushes. Clear off the old leaves from seakale and rhubarb; and cover the crowns with a layer of sand, dung, or any other protective substance. Finish earthing up all crops that require attention; cabbage may still be planted. Secure all such full-grown vegetables as are liable to be injured by frost, such as endive, lettuce, and

especially brocoli and cauliflower. The last two should be taken from the earth, and hung up by the stalks in an outhouse or shed. In the flower garden it is a busy month. The previously-prepared beds for tulips, hyacinths, polyanthus, ranunculus, and anemones, should all be planted during the first fortnight. Where the flowers are cultivated in the best style, the collectives are named, and require much precision in placing them in the beds; but when executed according to the rules laid down, the success is never doubtful. The other business of the season is, taking up the tubers of dahlia, marvel of Peru, &c.; pruning shrubs, as well to keep them in form as to encourage the flowering; all dead or decaying stems and leaves must be cleared off; the ground dug, the patches of perennial flowers reduced, vacancies filled up, edges repaired; and the whole garden should receive a general brushing over, laying all as neatly for the winter as possible.

DECEMBER. In the kitchen garden, the general operations for this month are similar to those for November. When the weather permits, prepare the ground for spring crops. In frosty weather, dung may be got on the land. If the ground be not too wet, proceed with digging, trenching, and ridging. In the flower garden, there is but little to do. If very hard frost sets in, some of the beds planted in the two preceding months, may require an occasional covering of mats, supported by hoops. The young seedlings of mignonette, and other flowers in frames, must not be forgotten. Indeed, everything liable to be hurt by frost, must have some kind of protection. A few more pots of bulbs and tubers, and also another succession of annual flowers, may be sown in pots to go into frames, and be forwarded for planting abroad in the spring.

YEAST.—This forms an active agent in many of the processes connected with domestic economy. There are a variety of ways of making it, and the following will be found among the best:—1. Boil, say on a Monday morning, two ounces of the best hops in four quarts of water for half an hour; strain it, and let the liquor remain till lukewarm; then put in a small handful of salt and half a pound of sugar; beat up a pound of the best flour with some of the liquor, and then mix all well together. On Wednesday, add three pounds of potatoes, boiled and afterwards mashed; let these stand till Thursday; then strain the mixture, and put it into bottles, and it is ready for use. Observe to stir it frequently while being made, and keep it near the fire. Before using, shake the bottle well. This yeast will keep in a cool place for two months, and is in its best condition at the latter part of that time. One recommendation of this preparation is, that it ferments spontaneously, not requiring the aid of other yeast; and if it be allowed to ferment thoroughly in the earthen bowl in which it is made, it may be corked up tightly, immediately it is bottled. 2. Into two quarts of water, put a quarter of an ounce of hops, two potatoes sliced, a tablespoonful of malt,

or sugar; boil for twenty minutes, strain through a sieve, let the liquor stand until milk-warm, then add a little German yeast for a first quickening; afterwards some of this yeast will answer the purpose. Let it stand in a large jar or jug till sufficiently risen. Then, put into an earthen bottle a part of the yeast for a future quickening, and let it stand in a cool place till required for a fresh making. This quantity is for a stone of flour; when using it, put the yeast to half or more of the flour, and two quarts of warm water, mix well; let it stand and rise; knead up with the rest of the flour, put the paste into or upon fins, let it stand to rise, bake, and a very good bread will be produced. 3. Boil a pound of flour, a quarter of a pound of brown sugar, and a little salt, in two gallons of water, for an hour; when milk-warm, bottle it, and cork it closely. It will be fit for use in twenty-four hours, and one pint of it will make eighteen pounds of bread. 4. Take a small teacupful of split or bruised peas, pour on them a pint of boiling water, and let it remain in a vessel in an oven or before the fire for several hours. After thus remaining, the water will have a froth on it, and produce sufficient good yeast for eight pounds of bread. 5. Boil in two quarts of water, a handful of hops, one apple, one potato, sliced; while hot, strain the liquor, and stir in coarse wheat flour until a thick paste is produced. Grate a large apple, and a large potato, put them into a gallon jar, and pour in the paste; when sufficiently cold, add a little yeast; in twelve hours it will be fit for use. 6. Put a handful of hops to three quarts of water, and let it boil for two hours; then strain the hops away, and mix a pint of flour with the liquor, and while hot, a teacupful of moist sugar; let it remain until it is lukewarm, then work it with a teacupful of yeast, stirring it constantly; let it stand for twenty-four hours, and then put it into jars for use. Quantity, one quart of the mixture to a bushel of flour.

With a view of placing the mode of making good yeast beyond all doubt, the following further instructions are given:—The vessel in which the yeast is made, should be a wide earthenware milk-bowl, capable of holding about six quarts, and in this, the mixture must be kept about the warmth of new milk, during the extra time of making; which will be most readily effected, by letting the vessel stand at a proper distance from the fire. When yeast is bottled, it must not be put into the bottles too soon, nor must the corks be forced in too tightly, or the bottles will burst. Seltzer-water bottles are excellent for this purpose. The bottles must be kept in a cool place, and allowed to remain undisturbed. When yeast is newly made, a larger quantity of it will be required to raise the bread than when it is six or eight weeks old.

YEAST CAKE.—Take two pounds and a half of flour, half a pound of sugar, ten ounces of butter, and four pounds of currants; set sponge, with half of the flour,

and three tablespoonfuls of yeast, in a pint of milk; work the butter and sugar in the other half of the flour with half a pint of milk; add the other ingredients, mix all together, and bake the cake in a hoop or tin for three hours.

Flour, 2½ lbs.; sugar, ½ lb.; butter, 10 ozs.; currants, 4 lbs.; yeast, 3 tablespoonfuls; milk, 1½ pint.

YEAST DUMPLINGS.—Roll as much bread-dough as may be required into small balls, drop them into boiling water, and boil them for a quarter of an hour. These may be either eaten with gravy, or with melted butter and sugar, flavoured with wine, &c. They are also nice when eaten with treacle.

YEAST, GERMAN.—This substance is the product of the fermentation of grape wine. It is partially dried, and then exported in bags. Large quantities are imported into England, and forwarded to the various agents residing in the chief towns. If a person is desirous of obtaining this yeast, he should apply to the nearest baker or confectioner, who will either be able to furnish a supply, or to give information where it may be obtained. German yeast may be used for all the purposes for which the ordinary yeast from malt liquor is employed; it will not, however, keep very long.

YEAST POULTICE.—Mix five ounces of yeast with an equal quantity of hot water; with these, stir up a pound of flour, so as to make a poultice; place it by the fire till it swells, and use. This poultice acts as a stimulant and emollient, and is applied to indolent abscesses and sores.

YEAST, TO PRESERVE.—When the yeast is taken from new beer, it must be put into a clean linen bag, and laid in a vessel half-filled with dried and sifted wood-ashes; the whole is then to be covered to the thickness of three or four inches with similar ashes, and then pressed together; the yeast should be then suffered to remain for twenty-four hours, or longer, if necessary, when the ashes will absorb all the moisture, and the yeast acquire the consistence of a thick paste. It must now be formed into small masses or balls, dried by a moderate heat, and kept in bags in a cool, dry place; when required for use, as many of these balls as are necessary, are to be dissolved in warm water or warm beer, and they will be found to answer every purpose of fermentation. Another method, is to beat up the newly-made yeast with a whisk until it is quite thin and smooth; then spread it in thin layers upon plates, adding coat upon coat, as the previous depositary becomes dry, and until a thickness of about half an inch is attained; the yeast is then removed from the plates, broken into small pieces, and kept for use, in air-tight bottles. Common ale yeast may be kept fresh and fit for use, several months, by the following method:—Put a quantity of it into a close canvas bag, and gently squeeze out the moisture in a screw press, till the remaining matter be as firm and stiff as clay. In this state, it may be closely packed up in a tight cask, for securing it from the air, and will keep fresh,

sound, and fit for use for a long time. Another method is to stir a quantity of yeast, and work it well with a whisk till it seems liquid and thin. Then get a large wooden dish or tub, clean and dry, and with a soft brush lay on a thin layer of yeast, turning the mouth downwards, to prevent its getting dusty, but so that the air may come in to dry it. When that coat of crust is sufficiently dried, lay on another, which serve in the same manner, and continue putting on others as they dry, till two or three inches thick, which will be useful on many occasions. But be sure the yeast in the vessel be dry before more be laid on. When wanted for use, cut a piece out, lay it in warm water, stir it together, and it will be fit for use. If for brewing, take a handful of birch tied together, dip it into the yeast, and hang it to dry, taking care to keep it free from dust. When the beer is fit to set to work, throw in one of these, and it will work as well as fresh yeast. Whip it about in the wort and then let it lie. When the beer works well take out the broom, dry it again, and it will do for the next brewing.

YELLOW DYE, FOR SILK, RIBBON, ETC.—Boil a large handful of horseradish leaves in two quarts of water for half an hour; then drain off the liquid from the leaves, and soak in it the articles which are to be dried; when the colour is deemed to be sufficiently deep, take out the articles, rinse them in cold water, and spread them out to dry. A very fine yellow colour will be thus produced.

YELLOW DYE, FOR SILK, STUFFS, AND PAPER.—Heat over a clear fire, in a clean copper pan, half a pound of acacia flowers, before they are full blown; continually stirring them briskly; when they assume a yellow hue, pour a little water over them; let it boil till it becomes of a considerable consistence, and has also acquired a deeper colour. Then strain the liquid through a piece of coarse silk, add to it half an ounce of finely pulverized alum, and an ounce of calcined and finely powdered oyster shells. Mix the whole well together, and bottle it for use.

YELLOW FEVER.—A disease almost peculiar to tropical climates, and countries exposed to dry sultry heats, and which has the peculiarity of more frequently attacking men than women. Yellow fever is indicated by all the primary symptoms of fever, by great pain in the head and eye-balls, great drowsiness, clammy mouth, furred tongue, skin hot, dry, and hard; bilious vomiting, jaundiced appearance of eyes and skin, frequent retching and vomiting of frothy bile; great determination of blood to the head, delirium; petechiae or purple spots break out over the body; the colour of the vomit changes to black, and a black fur lines the teeth, lips, and mouth, haemorrhage takes place from the mouth, ears, nostrils, and bowels; the pulse sinks to an imperceptible thread; and if unrelieved, hiccough supervenes and terminates the case.

The treatment of this disease depends upon the type of the fever that is developed in its progress, which though inflammatory

and intermittent in its first stages, becomes intensely typhoid in its last. The three most important systems, and which with modifications, constitute the sole practice, in this disease, are cold affusions, bleeding and purgatives; but these must be vigorously prosecuted within the first twenty-four hours, to avert the coming-on of the second or typhoid stage if possible.

YEW TREE.—The yew is one of the slowest growing trees we have, and a very little attention, by taking the points of the principal shoots off, will keep it in the form of a shrub for an almost indefinite time; treated in this way, it is sometimes of value for filling between the boles of the trees in distant shrubberies, as it will bear the confinement of such a place, and is not affected by the drip. On the other hand, if it is desired to assume the tree form, the greatest care must be taken of the leading shoot, for, as in the fir tribe, its loss is not readily repaired. As a hedge-plant in situations where a perfect screen from sweeping winds is required, the yew would be unrivalled but for its slow growth; it, however, bears removing very well, even when of great age, and this admits of large plants being employed, and thus a good edge may be formed at once. It bears clipping so well that, with attention to its early training, every part may be kept verdant, and equally full from bottom to top; this docility under the shears used to make it a great favourite, when sculptured articles of the kind were fashionable. When once established, the yew hedge is more durable than any other, exceeding even masonry in the time it will last. It should be clipped twice a year, in the early part of summer and autumn, and will then remain perfect. Yew trees delight in moist, rich soils; they grow best in deep loams or clay, but will live where it is much drier; they are usually raised from seed, or at least the common kinds, which produce it freely. This is gathered in autumn and mixed with sand, to be thrown in a heap in a shed, and, after turning two or three times, the pulp rots, and in spring, the stones are sown in light, rich earth, being covered about an inch deep. Part of the plants come up in the same season, and the remainder in that following. The choice sorts are propagated by cuttings, which may be formed of either one or two years' old wood; the terminal shoots of the branches form the best, and pieces of about six inches in length are to be preferred. These, taken off either in April or August, and hedged rather thickly into a shaded border, form rooted plants in a year. They are usually left undisturbed till two years old, and the removal of those pieces which do not strike, generally leaves them plenty of room. They are afterwards planted in nursery rows; but their subsequent progress is so slow, that few besides the commercial grower ever attempt to raise them. The seedlings receive similar treatment: and in each case, care must be taken not to damage the leading shoots till the plants have attained a couple of feet in height, when, if desired for hedges, they may be topped, and

the lateral shoots cut in and trained. September is the best month for removing these trees, whether old or young.

YOKING CATTLE.—The amount of labour, and the ease with which it may be performed, in agricultural practice, are materially influenced by the manner in which cattle are yoked to the plough. There are two methods in general use: one, yoking in pairs; the other, yoking in a single line. There are advantages and disadvantages attending each way; and the only method of arriving at a just conclusion is to compare these, and apply the deduction to such special circumstances as may exist. A disadvantage of yoking in pairs is, that in ploughing the furrows betwixt the ridges, the land-cattle go upon the ploughed land, and tread it down with their feet; this, especially if the land is wet, hurts it very much. Another disadvantage is, that when there is but as much of the ridge unploughed as to allow the land-cattle to go upon it with difficulty, they are frequently either going into the opposite furrow, and thereby giving the plough too much land; or, which is worse, they are jostling the furrow-cattle upon the ploughed land. When cattle are yoked in a line, they all go in a furrow. This necessitates the giving the plough more land than ordinarily. Another disadvantage is, that horses and oxen, under such conditions, are apt to throw the burden on their fellows. This they have a better opportunity of doing when yoked in a line, as each pulls by the traces of the one behind him; and, therefore, with the exception of the foremost horse, it is difficult to tell when they neglect their work. Another inconvenience attending yoking cattle in a line is, that when the fore-cattle are all yoked to the traces of the hindmost, it is obvious that, as the beam to which the draught is fixed is much lower than the shoulders of the first horse, by which the rest pull, such a weight must be laid upon his back or shoulders as must render him incapable of giving any assistance. When a body is to be moved forward, the nearer the direction of the force applied, approaches to the direction of the body, the greater is the influence exercised; and, therefore, as the plough moves horizontally, and as the direction of the united draught of a plough with the cattle yoked two abreast is more horizontally inclined than the direction of the draught in a plough with the cattle yoked in a line, the same force applied will give greater influence. This fact is confirmed when the cattle are yoked in pairs; for each has then a separate draught. The goadsman knows by the position of the yokes, whenever one of the horses does not draw equally well with his fellow; and the ploughman perceives, by the going of the plough, whenever either of the two pairs does not draw equally well with the other; for if the pair that go foremost neglect their work, the plough is pulled out of the ground; and if the pair that go hindmost neglect their work, the plough enters the soil too deeply. These different modes of yoking are, also, in a great measure dependent on

the particular soil. When the land is stiff and the labour severe, yoking the cattle in pairs seems preferable, as it affords the strongest draught; and when the land is wet and in danger of being injured by the treading of the cattle, the yoking them in a line confines them to the bottom of the furrow, and prevents a great amount of harm.

YORKSHIRE BACON.—It is generally admitted that the bacon which comes from Yorkshire is the best of this kind of food. The peculiarity of flavour depends upon the mode of curing, which is conducted in the following manner:—After killing, the meat is suffered to hang for twenty-four hours, before being cut up; saltpetre is then rubbed in, in the proportion of one pound to two hundred and eighty pounds of meat, and from twenty-one to twenty-eight pounds of common salt; this being well rubbed in, the meat is laid in a tub kept for that purpose. Having lain for a fortnight, it is turned over, and about seven pounds of salt is applied, after which the meat is left for a fortnight longer; it is then taken out, and hung up in the kitchen, the inside washed over with quicklime and water, to preserve it from the bacon-fly and prevent it turning rancid; it is then hung up in a spare room away from all heat, but where it is perfectly dry.

YORKSHIRE BISCUITS.—Mix a small teaspoonful of bi-carbonate of soda and a very little salt with a pound of flour; rub in a quarter of a pound of butter, add one egg, well beaten, and as much butter-milk as will render the mass of a stiff paste; knead till quite smooth; roll it, cut out the biscuits; prick them, and bake immediately in a moderately hot oven.

Flour, 1lb.; bi-carbonate of soda, 1 small teaspoonful; salt, sufficient; butter, $\frac{1}{2}$ lb.; egg, 1; butter-milk, sufficient.

YORKSHIRE CAKE.—To one quart of lukewarm milk add a quarter of a pint of good ale yeast, and mix them well together with enough flour to make a thick batter; let it stand in a warm place till it rises as high as it can; then rub half a pound of butter into some flour, and mix with it four eggs; beat all well together, add sufficient flour to make it into dough, and let it stand for half an hour; then work it lightly up and make into buns, put them on tins in a slow oven, cover them with a light cloth, and toast them with butter.

Milk, 1 quart; yeast, $\frac{1}{4}$ pint; flour, sufficient; butter, $\frac{1}{2}$ lb.; eggs, 4.

YORKSHIRE CAUDLE.—Take a pint of new milk, strain it with sack; then strain, and put it in a saucepan with two blades of mace, three slices of white bread, and a little grated nutmeg. Boil over a slow fire, then beat the yolks of four eggs, and the whites of two; stir into the candle to thicken, taking care to stir one way for fear of curdling it; sweeten to taste, and serve warm.

YORKSHIRE MUFFINS.—Set a sponge with a portion of a pint of new milk, and

half an ounce of German yeast, stirred into the midst of two pounds of flour; set it in a rather warm place, covered with a cloth; when well risen, melt two ounces of butter in the remainder of the pint of milk; mix it into the flour, adding a little salt and two eggs, well beaten; beat the dough for twenty minutes; then make it up into balls, on a board well dredged with flour; lay a cloth in a tray before the fire, but not too near; dredge it well with flour, and as the balls are made, place them at a certain distance from each other, in order that they may not run into each other in rising; cover them with a cloth, and in about twenty minutes lay them on hot tins; shape them with a knife, and bake them in a quick oven.

Flour, 2lbs.; milk, 1 pint; butter, 2ozs.; eggs, 2; German yeast, $\frac{1}{2}$ oz.

YORKSHIRE PUDDING.—This highly esteemed and excellent pudding may be made in a variety of ways, the following methods being the best:—1. Take two eggs, a pint of milk or of water, and half a teaspoonful of salt; beat these well together, put six large tablespoonfuls of flour into a basin, gradually incorporate with it the eggs, and the milk or water to a smooth batter, and beat these together for a quarter of an hour. Place over this the meat which is to be roasted or baked. Where it is wished to retain the gravy for other purposes, the pudding may be baked in the following manner:—Rub a tablespoonful of dripping over the bottom and the sides of the baking-pan, and into this, pour the batter through a strainer; bake the pudding for an hour and a half, frequently turning the pan, to allow of the pudding becoming uniformly brown.

2. Rub half a teaspoonful of baking-powder quite smooth, mix it well with six ounces of flour, and as much milk as will make it a stiff batter, and a teaspoonful of salt; beat the whole till perfectly smooth; add two eggs, well beaten, and as much milk as, with the quantity previously used, will make a pint in all. Melt some butter in a large flat dish or tin; pour in the batter; bake in a quick oven. 3. Make a stiff batter of the beaten whites and yolks of three eggs, half a pound of flour, a pint and a half of cold milk, a teaspoonful of salt, and two tablespoonfuls of ale. Pour the mixture into a shallow dish previously heated, by being placed under the joint which is being roasted. This pudding will take two hours to cook before a good fire. 4. Take six eggs, and an equal number of tablespoonfuls of flour, and a teaspoonful of salt. Whisk the eggs well, strain, and mix them gradually with the flour, then pour in by degrees as much new milk as will reduce the batter to the consistence of rather thin cream. Have a pan warmed in readiness; beat the batter briskly and lightly the instant before it is poured in, watch it carefully to prevent burning, and let the edges have an equal share of the fire. When the pudding is quite firm in every part, and well-coloured on the surface, turn the under side to brown.

5. Mix five tablespoonfuls of flour with a quart of milk, and four eggs well beaten;

butter a shallow pan, pour the mixture into it, and bake under the meat.

EGGS. 1. Eggs, 2; milk or wafer, 1 pint; salt, $\frac{1}{4}$ teaspoonful; flour, 6 tablespoonfuls. 2. Baking-powder, $\frac{1}{2}$ teaspoonful; flour, 2ozs.; milk, 1 pint; salt, 1 teaspoonful; eggs, 2. 3. Eggs, 3; flour, $\frac{1}{2}$ lb.; milk, $\frac{1}{2}$ pint; salt, 1 teaspoonful; ale, 2 tablespoonfuls. 4. Eggs, 6; flour, 6 tablespoonfuls; salt, 1 teaspoonful; milk, sufficient. 5. Flour, 5 tablespoonfuls; milk, 1 quart; eggs, 4.

YORKSHIRE SALAD.—Mix a tablespoonful of treacle with two tablespoonfuls of vinegar; add a little black pepper, and shred lettuces into the mixture, and young onions, if liked.

YUCCA.—A plant called, also, “Adam’s needle.” It constitutes one of the aloe-like genera with thick, sharp-pointed leaves, and many of the species appear very ornamental when planted out in borders or in lawns. The plant will grow in any common border where the situation is a dry one; and where nature has denied this, the best way is to plant the yucca on a hillock of suitable compost elevated above the level of the garden, covering the whole with turf.

YULE CAKE.—Take one pound of fresh butter, one pound of sugar, one pound and a half of flour, two pounds of currants, a glass of brandy, one pound of sweetmeats, two ounces of sweet almonds, ten eggs, a quarter of an ounce of cinnamon. Melt the butter to a cream, and put in the sugar. Stir it till quite light, adding the allspice and pounded cinnamon, in a quarter of an hour take the yolks of the eggs, and work them two or three at a time; and the whites of the same must by this time be beaten into a strong snow quite ready to work in. As the paste must not stand to chill the butter, or it will be heavy, work in the whites gradually, then add the orange-peel, lemon, and citron, cut in fine strips, and the currants, which must be mixed in well, with the almonds; then add the sifted flour and a glass of brandy. Bake this cake in a tin hoop, in a

hot oven for three hours, and put twelve sheets of paper under it to keep it from burning.

FRUITCAKE. Fresh butter, 1lb.; sugar, 1lb.; flour, 1 $\frac{1}{2}$ lbs.; currants, 2lbs.; brandy, 1 glass; sweetmeats, 1lb.; sweet almonds, 2ozs.; eggs, 10; allspice, $\frac{1}{2}$ oz.; cinnamon, $\frac{1}{2}$ oz.

Z.

ZINC.—A metal which does not occur in the native state, but is obtained from its ores, which are chiefly the sulphuret and carbonate of zinc. It has a brilliant metallic lustre, and a bluish white colour. It is so hard as to be filed with some difficulty, and its toughness is such as to require a great amount of force to break it when the mass is considerable. It undergoes little alteration, even by the combined operation of air and moisture at common temperatures. When heated to between the temperature of boiling water and 300° Fahrenheit, it becomes both malleable and ductile, so that it may be rolled into sheets and drawn otherwise. Exposed to a white heat, out of the contact of air, it sublimes and is condensed unchanged.

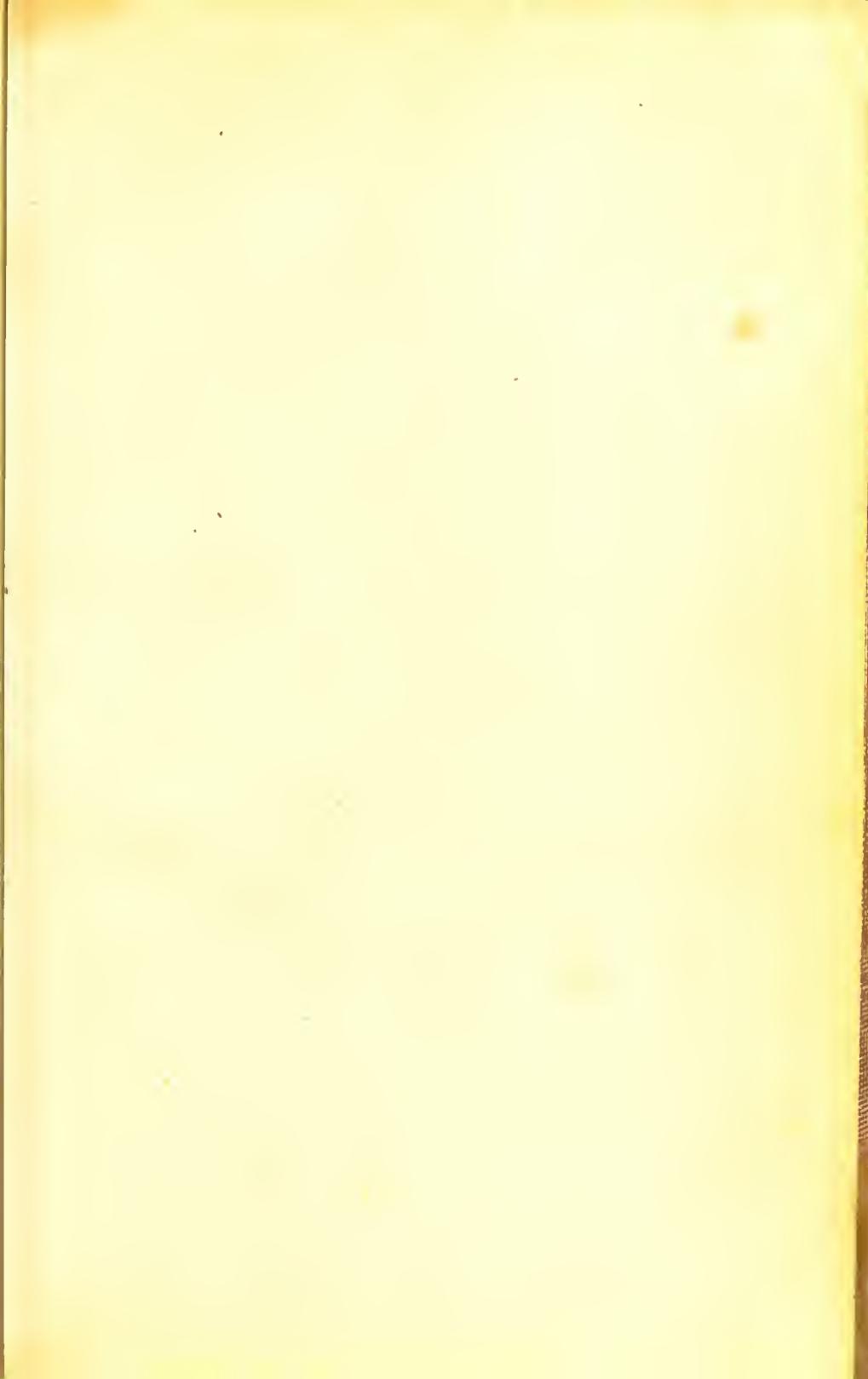
ZINC LOTION.—Sulphate of zinc, one drachm; water, one pint. This is a drying wash used in cracking of the skin, and after burns and scalds, to heal them and arrest the discharge.

ZINC OINTMENT.—This is made by rubbing well together one ounce of oxide of zinc, and six ounces of hog’s lard. This ointment is useful for children, it is also commonly used for dressing the sores remaining after scalds and burns, to absorb the great discharge which generally follows; and it is a very good application to cracked skin, from which a watery fluid oozes and irritates the neighbouring skin.

THE END.









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